NIST United States Department of Commerce
National Institute of Standards and Technology

NIST SPECIAL PUBLICATION 769

INDEX to the REPORTS of the National Conference on Weights and Measures

From the First to the Seventy-Third (1905 to 1988)

The National Institute of Standards and Technology[1] was established by an act of Congress on March 3, 1901. The Institute's overall goal is to strengthen and advance the Nation's science and technology and facilitate their effective application for public benefit. To this end, the Institute conducts research to assure international competitiveness and leadership of U.S. industry, science and technology. NIST work involves development and transfer of measurements, standards and related science and technology, in support of continually improving U.S. productivity, product quality and reliability, innovation and underlying science and engineering. The Institute's technical work is performed by the National Measurement Laboratory, the National Engineering Laboratory, the National Computer Systems Laboratory, and the Institute for Materials Science and Engineering.

The National Measurement Laboratory

Provides the national system of physical and chemical measurement; coordinates the system with measurement systems of other nations and furnishes essential services leading to accurate and uniform physical and chemical measurement throughout the Nation's scientific community, industry, and commerce; provides advisory and research services to other Government agencies; conducts physical and chemical research; develops, produces, and distributes Standard Reference Materials; provides calibration services; and manages the National Standard Reference Data System. The Laboratory consists of the following centers:

- Basic Standards[2]
- Radiation Research
- Chemical Physics
- Analytical Chemistry

The National Engineering Laboratory

Provides technology and technical services to the public and private sectors to address national needs and to solve national problems; conducts research in engineering and applied science in support of these efforts; builds and maintains competence in the necessary disciplines required to carry out this research and technical service; develops engineering data and measurement capabilities; provides engineering measurement traceability services; develops test methods and proposes engineering standards and code changes; develops and proposes new engineering practices; and develops and improves mechanisms to transfer results of its research to the ultimate user. The Laboratory consists of the following centers:

- Computing and Applied Mathematics
- Electronics and Electrical Engineering[2]
- Manufacturing Engineering
- Building Technology
- Fire Research
- Chemical Engineering[3]

The National Computer Systems Laboratory

Conducts research and provides scientific and technical services to aid Federal agencies in the selection, acquisition, application, and use of computer technology to improve effectiveness and economy in Government operations in accordance with Public Law 89-306 (40 U.S.C. 759), relevant Executive Orders, and other directives; carries out this mission by managing the Federal Information Processing Standards Program, developing Federal ADP standards guidelines, and managing Federal participation in ADP voluntary standardization activities; provides scientific and technological advisory services and assistance to Federal agencies; and provides the technical foundation for computer-related policies of the Federal Government. The Laboratory consists of the following divisions:

- Information Systems Engineering
- Systems and Software Technology
- Computer Security
- Systems and Network Architecture
- Advanced Systems

The Institute for Materials Science and Engineering

Conducts research and provides measurements, data, standards, reference materials, quantitative understanding and other technical information fundamental to the processing, structure, properties and performance of materials; addresses the scientific basis for new advanced materials technologies; plans research around cross-cutting scientific themes such as nondestructive evaluation and phase diagram development; oversees Institute-wide technical programs in nuclear reactor radiation research and nondestructive evaluation; and broadly disseminates generic technical information resulting from its programs. The Institute consists of the following divisions:

- Ceramics
- Fracture and Deformation[3]
- Polymers
- Metallurgy
- Reactor Radiation

[1]Headquarters and Laboratories at Gaithersburg, MD, unless otherwise noted; mailing address Gaithersburg, MD 20899.
[2]Some divisions within the center are located at Boulder, CO 80303.
[3] Located at Boulder, CO, with some elements at Gaithersburg, MD.

Index to the Reports of the National Conference on Weights and Measures

From the First to the Seventy-Third (1905 to 1988)

Frances G. Bell
W. G. Mott
Nancy Chaconas
Editors

Office of Weights and Measures
National Institute of Standards and Technology
Gaithersburg, MD 20899

(Supersedes NBS SP 691)

U.S. DEPARTMENT OF COMMERCE, Robert A. Mosbacher, Secretary
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, Raymond G. Kammer, Acting Director

Issued September 1989

Library of Congress Catalog Card Number: 89–600745

National Institute of Standards and Technology Special Publication 769
Natl. Inst. Stand. Technol., Spec. Publ. 769, 70 pages (Sept. 1989)
CODEN: NSPUE2

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 1989

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402–9325

FOREWORD

Since the inception of the National Conference on Weights and Measures (NCWM) in 1905, a great deal of information on a wide variety of weights and measures subjects has been published in the Reports of the Annual Meetings of the NCWM. This publication is designed to assist those who use the NCWM Reports in finding information on specific subjects or Conference presentations. It includes a subject index and a speaker index covering the proceedings of the Annual Meetings from the First in 1905 through the Seventy-Third in 1988.

This publication supersedes NBS Special Publication 691, which was an index of the Proceedings from the First through the Sixty-Ninth. The information from the First through the Fifty-Sixth was compiled by Frances Bell; from the Fifty-Seventh through the Sixty-Ninth by William G. Mott; and from the Seventieth through the Seventy-Third by Nancy H. Chaconas.

CONTENTS

Foreword iii

Introduction 1

Index by Subject 2

Index by Speaker 32

Appendix A: Conference Reports A-1

Index to the Reports of the National Conference on Weights and Measures From the First to the Seventy-Third (1905 to 1988)

Reports of the National Conference are published annually by the National Institute of Standards and Technology (formerly National Bureau of Standards). From 1905 through 1966, they were printed as Miscellaneous Publications with the prefix "M". From 1967 to the present time, they are printed as Special Publications with the prefix "SP".

For ease of reference, the index is presented in two parts: 1) a subject index; and 2) a speaker index. The subject index has been arranged to avoid lengthy listings under main topics. For instance:

- Under the main topic "scales," the reader is referred to main entries for specific types of scales.
- Under the main topic "specifications and tolerances," the reader is referred to main entries for specifications and tolerances for specific types of weighing or measuring devices.
- Some items, such as "resolutions" or "task groups" are listed under the topics they pertain to.

In an effort to anticipate the user's approach, many of the items are cross-referenced or are listed more than once, i.e., as a main entry and again as a secondary entry to the appropriate topic.

The speaker index is arranged alphabetically by name of speaker; under each name, the presentations of the speaker are listed alphabetically.

To identify the entries, the number of the annual meeting is shown in dark print preceding the comma in the citation, and the page number is in normal print after the comma (i.e., "**68**, 112" means that the item cited can be found in the Report of the 68th National Conference on page 112). Each set of report and page numbers is separated from the next set by a semicolon.

Appendix A lists National Conference Reports and provides information on how to obtain copies.

A

Acetylene gas, sale and marking, **39**, 63.
Accreditation of weights and measures jurisdictions, **56**, 58.
Adjustable components, **71**, 185.
  Sealing, **70**, 107.
  Electronic:
    Provision for sealing, **72**, 180; **73**, 239.
Adjustments to devices, **34**, 163.
Administration:
  Budgetary procedures:
    Justification, **42**, 112.
    Survey on, **37**, 39; **39**, 36; **43**, 21; **48**, 24.
  City and county departments, **16**, 34; **18**, 39; **22**, 62; **26**, 18; **31**, 7; **43**, 112.
  Efficiency, **10**, 122; **17**, 91; **22**, 29; **42**, 50; **52**, 22; **60**, 25.
  Federal-state cooperation, **57**, 140; **60**, 29; **60**, 79; **60**, 115; **65**, 25; **66**, 7.
  Foreign countries, report on, **2**, 35.
  Forums on, **42**, 105; **43**, 110; **44**, 117; **45**, 133; **46**, 132.
  Fundamentals, **47**, 85.
  Mechanical vs. supervisional activity, **12**, 57; **24**, 72.
  National survey of, **59**, 213; **60**, 165.
  Organization and management, **55**, 159; **55**, 180; **56**, 31; **56**, 40.
  State departments, organization and activities, **35**, 103; **40**, 13; **40**, 15; **41**, 5; **42**, 116; **43**, 69; **43**, 89; **43**, 115; **44**, 12; **44**, 117; **45**,137; 7; **46**, 11; **47**, 133; **47**, 135; **47**, 138; **51**, 33; **52**, 147. (Extensive discussion and reports on state administration may be found in the first 13 Conference Reports.)
  State-local cooperation, **16**, 28; **17**, 91; **26**, 27; **41**, 116; **42**, 105; **44**, 117; **65**, 249.
  State supervision, **8**, 117; **23**, 48.
  Survey on, **29**, 48; **36**, 47; **36**, 50; **42**, 60; **49**, 166; **55**, 161.
Advertising and labeling, false:
  Extraordinary terms, **47**, 52.
  Federal control of, **45**, 116.
  Resolution, **46**, 118.
Advisory Committee, National Conference (also see Liaison Committee):
  Proposal of Special Committee of Vice Presidents, **39**, 12.
  Reports of, **40**, 110; **41**, 14; **42**, 56; **43**, 28; **44**, 62; **45**, 29; **47**, 128; **48**, 95; **49**, 104.
  Resolution, **49**, 205.
Advisory committees to state agency, **49**, 106; **49**, 108.
Advisory members, NCWM, recognition, **70**, 35.
Aerosol containers, **45**, 77; **46**, 161.
  Developments in, **52**, 87.
  Industry study, **49**, 124.
  Labeling of, **63**, 151; **64**, 239; **65**, 69; **65**, 256; **67**, 237; **68**, 303.
  NBS study, **49**, 116; **50**, 35.
  Net weight labeling, **69**, 234; **71**, 228; **73**, 363.
  Packaging, **61**, 248; **64**, 183; **66**, 198; **67**, 88.
Aerosol paints (see Paints).
Afghans, **73**, 155.
Agri-chemical:
  Liquids, **71**, 192.
  Meters, **69**, 187.
Agriculture, U.S. Department:
  Activities of, **61**, 146; **64**, 154.
  Federal Grain Inspection Service (FGIS), **63**, 188; **64**, 126; **64**, 208; **64**, 244; **65**, 69; **65**, 252; **66**, 198; **66**, 234; **67**, 235; **68**, 300; **69**, 233; **71**, 227; **72**, 283; **73**, 363.
  Federally inspected plants, **71**, 71; **71**, 80; **73**, 171; **73**, 222.
  Food Safety and Inspection Service, **71**, 91.
    Memorandum of Understanding, Model Agreement between a State or Local Government and Food Safety and Inspection Service, USDA, **71**, 91; **71**, 85; **73**, 50; **73**, 87.
  Fruit and Vegetable Division, **33**, 133; **49**, 84.
  Grain Division, **49**, 87.
  Meat Inspection Division, **49**, 74; **57**, 112; **57**, 13
  Milk Marketing Orders Division, **49**, 80.
  Net weight, **59**, 143.
  Packers and Stockyards Administration, **49**, 71; **71**, 178.
  Poultry Division, **49**, 77.
  Role of USDA, **54**, 124.
  Total or Partial Quality Control Program, **73**, 230.
Air Force standards, **45**, 61.
Air pressure gauges, **58**, 139.
Air separators, **63**, 136.
Alabama law, **19**, 73.
Alaska, administration, in, **42**, 116; **44**, 69.
Alcoholic beverages:
  Containers:
    Federal marking requirements, **49**, 67.
    Federal quantity requirements, **41**, 23; **66**, 200.
    Resolutions, **31**, 158; **32**, 124; **47**, 99.
    Standardization, **32**, 30; **46**, 15; **47**, 49; **65**, 210.
  Reference temperatures, **70**, 79.
Alloys, precious metal, for dental purposes:
  Tolerances and marking, **49**, 97.
Altitude correction factor (Hydrocarbon Gas Vapor-Measuring Devices Code), **73**, 261.

American National Standards Institute (ANSI):
Role in national standardization, **59**, 55; **59**, 94; **60**, 144; **66**, 17; **68**, 17.
American Railways Engineering Association (AREA):
High capacity scales, **58**, 49.
Track scales, **57**, 42.
American Society for Testing and Materials (ASTM):
Activities, **62**, 152; **64**, 39.
NCWM cooperation, **65**, 190.
Type approval, **65**, 187.
Ammonia, anhydrous, **71**, 200.
Liquid meters:
Normal tests, **72**, 224.
Sale and marking, **38**, 76.
Weight indications, **72**, 222.
Ampere (definition), **72**, 251.
Analog dial (see Dials).
Animal bedding, **73**, 159.
Animal scales:
Definition, **72**, 198.
Sensitivity, **72**, 196.
Antifreeze:
Sale of, **33**, 54; **61**, 236.
Regulation questionnaire, **67**, 153.
Argon, liquid, **71**, 202.
Assay Commission, **25**, 122.
Association of American Railroads, **57**, 41.
ASTM D4814 (Standard Specification for Spark-Ignition Engine Fuel), **73**, 170.
Auditing, cost-benefit performance, **63**, 59.
Auditing Committee, NCWM:
Reports, **57**, 184; **58**, 178; **59**, 250; **60**, 239; **61**, 263; **62**, 262; **63**, 230; **64**, 269; **65**, 276; **66**, 259; **67**, 295; **68**, 323; **70**, 234, **71**, 244; **72**, 301; **73**, 382.
Australia:
Metric conversion of, **59**, 67; **62**, 130.
Automated advanced metrology, **71**, 28.
Automatic bulk weighing systems, **71**, 189; **72**, 204.
Automatic-indicating scales:
Characteristics of, **10**, 95; **12**, 73.
Indications, printed and remote, **30**, 19.
Large-capacity, specifications and tolerances, **15**, 34; **16**, 132; **22**, 72; **42**, 77.
Specifications and tolerances, **22**, 119; **23**, 79; **23**, 83; **23**, 150; **24**, 146; **25**, 104; **26**, 120; **27**, 79; **35**, 83; **47**, 112; **51**, 161; **54**, 170.
Automatic temperature compensating (ATC) systems (see Temperature compensation).
Automation and factory quality control, **69**, 23.
Automobile Association, American, cooperative program of, **22**, 86.
Awards, honor, presentation of, **41**, 10; **42**, 11; **43**, 4; **44**, 4; **45**, 3; **46**, 11; **47**, 8; **48**, 10; **49**, 5; **50**, 11; **51**, 7; **52**, 28; **53**, 15; **54**, 13; **55**, 31; **56**, 29; **57**, 15; **58**, 13; **59**, 23; **60**, 13; **61**, 137; **62**, 125; **63**, 90; **65**, 12; **66**, 21; **67**, 18; **68**, 16; **69**, 35.
The President's Award, **71**, 55; **73**, 44.
Banner, **71**, 55.
Certificate, **71**, 55.
Axle-load scales:
Access to, **70**, 110.
Portable, **73**, 251.
Sensitivity, **72**, 196.
Specifications and tolerances, **38**, 89; **46**, 140; **46**, 141; **46**, 143; **51**, 160; **52**, 172; **53**, 113; **61**, 175; **63**, 173; **64**, 198.
Testing:
Resolutions, **37**, 89; **38**, 98.
Shift test, **70**, 109.
Toll collection, **61**, 86.
Axle-load weighers, portable, **71**, 212.
Axle-load weighing:
Investigation of, **39**, 72.
Problems in, **41**, 124
Resolution, **40**, 124.

B

Bacon, **72**, 89; **73**, 79; **73**, 225.
Baggage scales (see freight and baggage scales).
Bags, shipping:
Sizes, **32**, 31; **32**, 45.
Drawstring and zip-lock, **73**, 176.
Bakery products, packaging, **66**, 153; **67**, 89.
Balance indicator, equal arm scale, **73**, 241.
Balance, Russell 1,000-pound, **40**, 31.
Balances, prototype, for use in state laboratories, **45**, 57.
Banana market, **45**, 23.
Bark mulch (see Mulch).
Barometric pressure, **73**, 261.
Barrel, standard:
Law, **9**, 53; **9**, 56; **10**, 176; **64**, 89; **65**, 40.
Resolution, **8**, 223.
Barriers to Competitiveness, **73**, 24.
Batching system, **71**, 179.
Bed sheets, **72**, 127.
Bedspreads, **73**, 155.
Beer barrels:
Sizes for, **9**, 146; **41**, 25.
Testing, **25**, 113.

Belt-conveyor scales, **36**, 53; **37**, 65; **69**, 181, **71**, 187; **72**, 203; **73**, 64.
Draft code, **69**, 197.
Chain test, **71**, 188.
Conditions of tests, **71**, 187.
Material tests, **71**, 188.
Radiated interference, **72**, 202.
Rate of flow indicator, **71**, 187.
Scale alignment, **71**, 189.
Simulated load test, **72**, 203.
Specifications and tolerances, **52**, 173; **53**, 117; **54**, 179; **55**, 244; **56**, 176, **60**, 150; **62**, 175; **63**, 176; **64**, 221; **65**, 221.
"Wireline," **71**, 189.
Berries and other small fruits, sale and marking, **32**, 29; **32**, **42**; **56**, 199.
Berry baskets and boxes:
Specifications and tolerances, **9**, 59; **9**, 79; **9**, 90; **10**, 199; **11**, App. 1, **14**; **34**, 158; **54**, 196; **55**, 261; **61**, 199; **64**, 214.
Better Business Bureau, activities, **21**, 93.
Blankets, **73**, 155.
Bologna, **72**, 89.
Borax, U.S., **70**, 93; **71**, 156.
Presentation to Committee on Liaison, **69**, 269.
Bottles:
Lubricating oil (see Lubricating-oil bottles).
Milk and cream (see Milk and cream bottles).
Plastic (see Plastic bottles).
Bread:
Nebraska Supreme Court decision, **17**, 51.
Sale of, **56**, 199; **65**, 205.
Tolerances, **14**, 37; **14**, 84; **15**, 79; **15**, 91; **16**, 112; **17**, 51; **17**, 63; **18**, 143; **18**, 154; **18**, 163; **46**, 90.
Bread (continued):
Weight standardization legislation, **13**, 115; **13**, 188; **14**, 24; **14**, 72; **14**, 80; **14**, 83; **15**, 88; **16**, 98; **16**, 112; **17**, 40; **17**, 59; **17**, 76; **18**, **143**; **18**, 154; **19**, 83; **24**, 162; **26**, 34; **26**, 95.
Resolutions, **13**, 174; **19**, 170.
Weight:
Subsections, **72**, 130.
Variables, contributing factors, **46**, 90.
Budget development (see National Conference on Weights and Measures).
Bulbs, method of sale, **61**, 223.
Bulk food commodities (see Commodities).
Bulk sales, **71**, 140.
Bulk weighing systems, **71**, 190.
Automatic, **72**, 204.
Bureau of Alcohol, Tobacco and Firearms, **72**, 295.
Burgess, George Kimball, tribute to, **25**, 2.
Bushel:
Three-eighths, **39**, 53; **39**, 60; **39**, 89.
Resolution, **39**, 91.
Weights, **8**, 106; **8**, 109; **16**, 82.
Resolutions, **8**, 200; **8**, 202.
Butter and butter-like spreads, sale of, **43**, 49; **56**, 199; **64**, 182; **66**, 96; **67**, 90; **68**, 303; **70**, 82; **71**, 146.
Butterfat-test scales (see cream-test and butterfat-test scales).

C

Canada:
Administration in, **24**, 61; **36**, 7; **42**, 44.
Metric conversion, **59**, 87; **62**, 46; **64**, 99.
Type approval, **47**, 27.
Cans for food (see also Packages):
Standardization, **27**, 36; **28**, 60; **29**, 95; **29**, 112; **29**, 117; **30**, 145.
Resolutions, **27**, 109; **28**, 137.
Capacity measures (see Liquid measures; also Dry measures).
Car wash timers, **71**, 204.
Car weighing, **7**, 162.
Carat weight, resolution, **8**, 223.
Carbon dioxide (CO^2), **71**, 200.
Liquid-measuring devices, **72**, 254.
Liquid meters, **73**, 270.
Card-activated systems, **73**, 297.
Carpets and carpet padding materials:
Method of sale, **61**, 238; **62**, 221.
Cartridge, Preval, characteristics of, **52**, 90.
Cash-credit pricing: **69**, 235.
Cash registers, electronic,
Tare capability, **59**, 47; **62**, 166; **63**, 167.
Catalyst beads, **66**, 100.
Caulking compounds:
Checking of, **55**, 136.
Sale and marking, **52**, 162; **53**, 130; **54**, 213; **56**, 204; **66**, 101.
Centigrade scale for temperature, **11**, 39.
Central America, weights and measures in, **42**, 128.
Cereal grains and oil seed,
Method of sale, **66**, 97.
Certificate of Conformance (see National Type Evaluation Program).

Certificates, uniform weight, for movement of household goods, **39**, 50; **40**, 125.
Certification plan for federal specifications, **25**, 42.
Certification plan (NTP) (see National Training Program).
Ceylon, administration in, **53**, 44.
Chain-store operation, **21**, 79.
Chairman of National Conference, addresses, **43**, 4; 44, 5; **45**, 4; **46**, 24; **47**, 8; **48**, 18; **49**, 11; **50**, 24; **51**, 15; **52**, 29; **53**, 19; **54**, 24; **55**, 3; **56**, 1; **57**, 1; **58**, 1; **59**, 1; **60**, 1; **61**, 137; **62**, 125; **63**, 78; **64**, 26; **65**, 12; **66**, 21; **67**, 18; **68**, 2; **69**, 11; **70**, 26; **71**, 39; **72**, 32; **73**, 28.
Chairman-Elect, National Conference, **70**, 33.
Challenges facing government, industry, and consumers, **55**, 41.
Charcoal briquettes, sale of, **41**, 135.
Checkweighing scales, **39**, 29.
Cheese and cheese products, sale and marking, **31**, 119; **31**, 135.
Chicken parts, ready to eat, **70**, 83.
Circular dial (see Dial).
Clams, **70**, 85; **71**, 147.
Coal:
  Bootleg control, **25**, 129.
  Chemically treated, sale of, **23**, 66.
  Interstate trucking, **31**, 140.
  Quality, **18**, 186.
    Resolution, **16**, 149.
  Sale and weighing, **13**, 182; **14**, 54; **16**, 123; **16**, 127; **24**, 147, 110.
  Uniform ton, **15**, 53.
    Resolution **15**, 124.
Coffee packages, **36**, 98.
Coffee makers, coolers,
  Labeling, **62**, 214.
Coke, sale and weighing, **11**, 159; **16**, 127.
Combination railroad track and vehicle scales, **71**, 182.
Combined LMD code (see Liquid-measuring devices).
Comforters, **73**, 155.
Commerce, U.S. Department of:
  Activities, **47**, 2; **48**, 2; **50**, 1; **52**, 1.
  Addresses of Secretary of Commerce or his representative are found in all reports starting with the Third Conference Report, except 4th, 20th, 21st, 24th, 29th through 37th, and 42d.
  Publications:
    "What about Metric," **61**, 22.
Commodities:
  Bulk food, pricing, **61**, 230; **70**, 108; **72**, 131.
  Combination quantity, **57**, 149; **58**, 147; **59**, 224; **60**, 176.
  Committee reports, **31**, 118; **32**, 27; **33**, 41; **34**, 112; **35**, 122; **36**, 92; **37**, 57; **38**, 57; **39**, 61; **40**, 94.(Committee consolidated with Committee on Legislation in 1956 to form new Committee on Laws and Regulations.)
  Container type, method of sale, **62**, 212.
  Imported packaged, **60**, 222.
  Method of sale, **67**, 85; **68**, 135.
  Model Regulation, **56**, 199; **58**, 146; **59**, 222; **60**, 174; **61**, 230; **62**, 217; **63**, 147; **64**, 174; **65**, 205; **66**, 96; **67**, 90; **68**, 155; **69**, 108; **69**, 126.
  Wet, **73**, 252.
Commodity Requirements, Task Force on, **70**, 46; **70**, 59; **71**, 70; **71**, 161; **73**, 50; **73**, 74; **73**, 170.
  Flour, **72**, 63.
  Meat and poultry, **72**, 64.
  Pilot study, **73**, 74.
Commodity Standards, Subcommittee on, **70**, 47.
Communication:
  Weights and measures enforcement, **44**, 41.
  "Key to Progress," **70**, 26.
Complaint handling, **73**, 52; **73**, 105.
Compressed gases, **73**, 160; **73**, 218.
  In cylinders, **72**, 134.
Computers:
  Networking, **69**, 110.
  Revolution, **65**, 22.
  Uniformity, **69**, 31.
Computing scales:
  Drum-type, **71**, 180.
  Money-value increments, **44**, 91.
  Money-value tolerance, 44, 90.
  Specifications and tolerances, **8**, 219; **9**, 61; **9**, 104; **10**, 146; **10**, 214; **10**, 225; **11**, 109; **11**, App. 1, 33; **17**, 131; **24**, 146; **26**, 121; 34, 159; **56**, 168; **61**, 176; **62**, 203; **63**, 163; **68**, 221; **69**, 175.
Concentrated load capacity, **73**, 242.
Concrete batching scales:
  Specifications and tolerances, **52**, 172.
Concrete mobile, **55**, 262.
Confectionary:
  Packaging, **60**, 187.
Conference (see National Conference on Weights and Measures).
Consolidation of weights and measures activities with other government activities, resolution, **38**, 99.
Constitution and By-Laws Committee, **5**, 89; **5**, 119; **9**, 115; **10**, 58; **10**, 110; **11**, 168; **20**, 134; **21**, 74; **26**, 148.
Constitution and By-Laws, general (see National Conference on Weights and Measures).
Construction materials hopper scales, **71**, 177.
  Tolerance values, **71**, 177.

Consumers:
Education for, **13**, 167; **14**, 21; **19**, 86; **21**, 62; **27**, 16; **28**, 28; **30**, 100; **31**, 3; **32**, 49; **52**, 155; **53**, 48; **56**, 150.
Chicago plan, **43**, 23.
Elementary school outlines, **51**, 139.
Resolutions, **11**, 179; **12**, 207.
Legislation for, **55**, 33.
Involvement, **72**, 32.
Organizations, **60**, 75; **60**, 117; **61**, 120; **61**, 141; **61**, 229, **63**, 208.
Problems of, **54**, 143; **56**, 12; **56**, 67.
Protection for, **25**, 42; **44**, 105; **45**, 122; **45**, 126; **48**, 10; **49**, 98; **49**, 133; **54**, 17; **54**, 137; **57**, 78; **58**, 82; **58**, 122; **60**, 67; **61**, 103; **63**, 91, **70**, 15.
American Council on Consumer Interests, activities of, **56**, 12.
Better Business Bureau, activities, **21**, 93.
Chicago movement, **55**, 191.
Consumer Council of Massachusetts, activities, **55**, 197.
National Conference contributions, **54**, 7.
National Consumers League, resolution, **53**, 151.
Resolutions, **46**, 117; **47**, 100.
Symposium on, **43**, 31.
Standards for, **52**, 39.
Trends and activities, **57**, 70; **57**, 141; **58**, 81; **58**, 116; **65**, 102.
Container Acts, Standard:
Amendments:
Additional sizes of hampers, round stave, and splint baskets, resolution, **48**, 95.
Three-eighths bushel, **39**, 53; **39**, 60; **39**, 89. Resolution, **39**, 91.
Enforcement, **23**, 53.
Provisions, **19**, 160; **22**, 13; **28**, 128; **49**, 84.
Repeal, **54**, 88.
Containers (also see 1) Packages; and 2) Cans):
Cylindrical, quantity declaration, **60**, 184.
Deceptive and slack-fill, **30**, 138; **32**, 11.
Interstate shipment, **19**, 160; **29**, 9; **36**, 74.
Legislation, consolidation of, **24**, 44; **25**, 107; **30**, 8.
Method of sale, **59**, 223.
Net-weight marking, resolutions, **4**, 59; **7**, 144.
Standardization, **6**, 46; **6**, 134; **12**, 89; **13**, 122; **30**, 145; **32**, 18.
Resolution, **14**, 110; **19**, 168.
Transparent, **33**, 141.
Conveyor scales (see Belt-conveyor scales).
Cooperation:
Federal-state, **4**, 5; **5**, 8; **6**, 111; **13**, 13; **24**, 77; **27**, 25; **29**, 25; **30**, 29; **31**, 16; **32**, 100; **34**, 105; **34**, 108; **44**, 1; **49**, 6; **53**, 72; **56**, 5; **65**, 26; **65**, 147.
Resolution, **31**, 158.
Cooperation (continued):
Industry-government, **17**, 111; **22**, 86; **23**, 29; **25**, 61; **34**, 129; **42**, 107; **52**, 105; **53**, 50; **53**, 66; **54**, 1.
"New Federalism," **59**, 6.
Officials, among, **30**, 81; **42**, 110.
Cordage, sale and marking, **16**, 71; **31**, 120; **40**, 100; **41**, 137; **42**, 102.
Baler and binder twine:
Method of sale, **61**, 237; **62**, 220; **63**, 147; **64**, 174.
Types, **61**, 44.
Cordage-measuring devices (also see Wire and cordage-measuring devices):
Specifications and tolerances, **35**, 82; **36**, 105; **37**, 82; **52**, 184; **53**, 122; **54**, 194.
Testing, **35**, 100.
Corned beef, **73**, 78.
Cornmeal, labeling of, **66**, 152.
Cost-benefit analysis, **52**, 132.
Cottage cheese and cottage cheese products, **72**, 131.
Cotton:
Bale standardization, **23**, 22.
Batting, sale of, **30**, 130.
Net-weight sale, **23**, 22.
Weighing, **16**, 26.
Counter scales and balances:
Side beams on, **22**, 117; **23**, 134.
Specifications and tolerances, **8**, 216; **8**, 265; **9**, 60; **9**, 95; **10**, 156; **10**, 207; **10**, 223; **11**, 108; **11**, 150; **11**, App. 1, 25; **21**, 151; **22**, 72; **24**, 91; **24**, 145; **25**, 106; **26**, 126; **32**, 91; **32**, 94; **33**, 100; **33**, 103; **54**, 173.
Counting scales, **64**, 200; **65**, 220; **73**, 254.
Court cases:
Preparation, **41**, 17.
Technicalities, **38**, 64.
Court decisions:
Citations, **19**, 68; **20**, 80; **23**, 120; **26**, 160; **27**, 107; **31**, 156.
Legal status, **22**, 132.
Crane scales:
Design criteria and tolerances, **72**, 193.
Specifications and tolerances, **42**, 77; **44**, 82; **45**, 94; **49**, 179; **71**, 178.
Tolerance values, **71**, 177; **72**, 194.
Cream-test and butterfat-test scales:
Maintenance, **9**, 39; **17**, 11.
Specifications and tolerances, **8**, 220; **9**, 62; **9**, 111; **10**, 216; **11**, 153; **11**, App. 1, 36; **17**, 132; **22**, 72; **34**, 160.
Credit card surcharge, **71**, 229; **72**, 285; **73**, 364.
Cryogenic fluids, flow measurement of, **56**, 127.

Cryogenic liquid-measuring devices:
Specifications and tolerances, **52**, 182; **57**, 170; **59**, 238; **61**, 193; **63**, 184; **68**, 260; **69**, 237.
U.S. Treasury Department Customs Service, weighing, **18**, 104.
Cryogenic meters, permanence test, **72**, 244.
Cryogenics, on-board weighing systems, **71**, 202.

D

Dana, Margaret, resolution on, **55**, 285.
Data processing, automatic, in weights and measures, **52**, 45; **55**, 231; **56**, 47; **56**, 147; **69**, 28; **69**, 224.
Decreasing load test, **72**, 199.
Demographics:
Trends and impact on the 80's, **65**, 156.
Desktop publishing, **73**, 41.
Device Evaluation Index, **70**, 53.
Dials, **71**, 179.
Analog, **71**, 180.
Circular, **71**, 180.
Digital electronic scale, **72**, 201.
Discharge hose:
Length, **72**, 216.
Definition, **72**, 217.
Discharge line, definition, **72**, 217.
Discrimination tests, **73**, 344.
Dispensers (see Motor fuel dispensers).
"Dollies," **71**, 174.
Drained Weight:
Enforcement and requirements, **61**, 112; **61**, 245.
Packaging and labeling, **59**, 218; **61**, 110; **63**, 20.
Draw-string bags, **73**, 176.
Dry commodities, sale by weight, **8**, 106; **8**, 109; **9**, 147; **10**, 109; **10**, 189; **11**, 88; **12**, 212; **13**, 185; **15**, 17; **16**, 82; **17**, 37.
Resolutions, **8**, 200; **10**, 189; **12**, 205; **13**, 177; **16**, 139; **19**, 167.
Dry measures:
Abolition, **15**, 17.
Resolutions, **8**, 200; **16**, 146; **32**, 124.
Nonwatertight, **73**, 264.
Specifications and tolerances, **8**, 212; **9**, 59; **9**, 79; **10**, 197; **11**, 137; **11**, App. 1, 12; **24**, 91; **61**, 199.
Standardization, **12**, 89.
Testing, **8**, 181.
Dry tare (see Tare).
Dried used tare (see Tare).

E

Education:
Consumers (see Consumers).
Data processing profile, **69**, 224.
Measurement Science Course, **49**, 13; **49**, 15; **49**, 162; **50**, 178; **51**, 133; **52**, 153; **54**, 166; **65**, 34.
Regional committees, **69**, 210.
Training programs, **69**, 210, **70**, 23; **70**, 46.
Users of devices, **18**, 44.
Weights and measures officials, **26**, 22; **30**, 32; **35**, 105.
Audio-visual, **49**, 103; **50**, 181; **51**, 135; **52**, 140.
Home study course, **54**, 167; **55**, 233; **57**, 138.
NBS school, **33**, 4; **42**, 43; **46**, 32; **47**, 94.
OWM training program, **49**, 49; **52**, 140; **53**, 31.
Suggested training program, **55**, 83.
Training schools:
Necessity for, **37**, 120.
Resolution, **43**, 102.
Education Committee:
Reports, **30**, 103; **31**, 45; **32**, 51; **33**, 115; **34**, 71; **35**, 99; **36**, 47; **37**, 39; **38**, 56; **39**, 32; **40**, 27; **41**, 97; **42**, 41; **43**, 21; **44**, 24; **45**, 16; **46**, 28; **47**, 93; **48**, 24; **49**, 161; **50**, 178; **51**, 133; **52**, 153; **53**, 108; **54**, 165; **55**, 230; **56**, 147.
Resolution, **29**, 145.
Education, Administration, and Consumer Affairs Committee, National Conference, **56**, 213.
Reports, **57**, 137; **58**, 140; **59**, 210; **60**, 165; **61**, 160; **62**, 240; **63**, 190; **64**, 223; **65**, 241; **66**, 187; **67**, 216; **68**, 277; **69**, 209, **70**, 175; **71**, 217; **72**, 265; **73**, 312.
Eggs:
Grading, **32**, 29; **32**, 41.
Regulation of sale, **19**, 118; **59**, 224.
Elapsed-time tests, **71**, 193.
Electric watt-hour meters:
Code, **48**, 115; **72**, 248; **73**, 269.
Testing, **10**, 52; **21**, 54.
Kilowatt hour, **63**, 188; **72**, 251.
Electromagnetic interference (EMI), **71**, 175; **72**, 202.
Field testing procedure, **63**, 1; **63**, 13; **63**, 170; **65**, 140.
Scales code, **72**, 190.
Susceptibility, **71**, 176.
Electronic adjustable components (see Adjustable components).

Electronic scales, **60**, 59; **63**, 168; **69**, 237.
Developments, **35**, 43; **38**, 52.
Digital, **57**, 117; **58**, 36; **58**, 41; **59**, 47; **63**, 118; **63**, 168; **64**, 199; **64**, 204; **65**, 143.
Electronic thermometers (see Thermometers).
Electronics revolution, **65**, 11.
EMI (see Electromagnetic interference).
Energy:
Allocating costs, **73**, 53.
Allocation systems, **71**, 160; **72**, 52; **72**, 229; **73**, 114.
Task Force on, **73**, 53; **73**, 114.
Energy forecast, **58**, 17; **60**, 14.
Engineering performance standards, **51**, 9.
England, administration (see Great Britain).
English system of weights and measures, history, **50**, 128.
Equal-arm scales, **73**, 241.
Equipment repair, **73**, 245.
Influence factors, **73**, 246.
Error determination, **73**, 346.
European Economic Community:
Type approval and verification, **65**, 97.
Evidence, obtaining for prosecution (see Prosecution).
Executive Committee, National Conference:
Membership, resolution, **20**, 134.
Policy statement on procedure, **55**, 279.
Reports, **39**, 71; **40**, 19; **41**, 23; **43**, 61; **44**, 39; **45**, 41; **45**, 145; **46**, 118; **47**, 125; **48**, 69; **49**, 159; **50**, 175; **51**, 131; **52**, 151; **53**, 103; **54**, 157; **55**, 278; **56**, 212; **57**, 178; **58**, 171; **59**, 243; **60**, 229; **61**, 251; **62**, 253; **63**, 254; **65**, 263; **66**, 239; **67**, 281; **68**, 69; **69**, 47, **70**, 30; **71**, 48; **72**, 42; **73**, 37.
Reports on meeting of incoming committee, **37**, 90; **38**, 101; **39**, 92; **40**, 110; **41**, 40; **42**, 104; **43**, 109; **44**, 116; **45**, 132; **46**, 155; **47**, 132; **48**, 118; **49**, 160; **50**, 177; **51**, 132; **52**, 152; **53**, 105; **54**, 160; **55**, 282; **56**, 222.
Executive Secretary of National Conference:
Reports, **5**, 12; **6**, 13; **7**, 16; **8**, 15; **9**, 15; **10**, 46; **11**, 83; **12**, 25; **13**, 18; **22**, 36; **37**, 1; **46**, 124; **47**, 95; **48**, 21.
Exhibits, **39**, 32; **50**, viii; **56**, 110.
Exposure, variations resulting from, **70**, 81.

F

Fabric measurement, department store control, **20**, 8.
Fabric-measuring devices:
Characteristics, **11**, 117; **39**, 64.
Specifications and tolerances, **15**, 126; **16**, 118; **17**, 21; **21**, 149; **22**, 69; **34**, 151; **35**, 82; **44**, 88; **52**, 184; **53**, 121, **62**, 190.
Testing, **15**, 93; **55**, 139; **66**, 168.
Face (definition), **72**, 219.
Farm milk tanks:
Characteristics, **37**, 20.
Gage rods, **62**, 189; **65**, 234.
Metric conversion, **65**, 234.
Specifications and tolerances, **38**, 90; **39**, 82; **45**, 98; **46**, 151; **47**, 122; **54**, 190; **55**, 255; **58**, 168; **60**, 206; **61**, 196; **62**, 188; **64**, 211, **64**, 220; **65**, 233; **68**, 264; **69**, 194.
Testing, **39**, 54; **40**, 112.
Fast food:
Carry-out, **70**, 83.
Sale by count, **64**, 181.
Federal Grain Inspection Service (see Agriculture, U.S. Department).
Federal Property and Admin Services Act of 1949, Authorizations, **57**, 136.
Federal role in net content compliance, **71**, 229.
Federal Specifications Board, **18**, 146; **20**, 34; **25**, 23.
Federal-state cooperation (see Cooperation).
Federal-state technical services, **49**, 56.
Federal Trade Commission:
Activities, **22**, 42; **44**, 93; **49**, 64; **57**, 109; **57**, 133.
Net weight, **64**, 244; **65**, 252.
Packaging uniformity, **60**, 186.
Policy on H-133, **71**, 160.
Regulations, **57**, 133.
Role of, **54**, 119.

Federally inspected plants (see Agriculture, U.S. Department).
Fee system, **12**, 87; **26**, 9.
Resolution, **10**, 134.
Feed:
Liquid, **71**, 192.
Weighing systems, truck-borne, **57**, 161.
Fence wire:
Method of sale, **64**, 180.
Fertilizers:
Chemical, sale and marking, **38**, 76.
Inert, sale and marking, **38**, 77; **40**, 94; **42**, 103; **53**, 119.
Liquid, sale and marking, **39**, 61; **41**, 137; **53**, 119; **53**, 131; **71**, 192.
Survey and study on sale, **52**, 137.
Field standard test weights (see Test weights).
Field verification of weighing devices, model program for, **65**, 209; **66**, 105; **66**, 207; **67**, 157.
Film:
"Entertainment Value and Packaging," **61**, 249; **64**, 184.
"The Marketplace," **62**, 2; **63**, 91; **63**, 192; **64**, 224; **65**, 247.
"Whatta Family," **62**, 242.
Firewood, sale of, **32**, 31.
Fischer, Louis Albert, memorial and resolution, **15**, 2; **15**, 16.
Fish and fish products:
Dried, sale and marking, **31**, 119; **32**, 30.
Fresh-water, **70**, 83.
Frozen:
Packaging, **33**, 33; **33**, 37; **33**, 40.
Sale and marking, **32**, 30; **42**, 101.
Glazed raw fish, **73**, 173.
National Marine Fisheries Service, **72**, 285.
Regulation, federal, under Bureau of Commercial Fisheries, **49**, 93.
Shellfish, whole, **73**, 157.
Smoked, sale and marking, **32**, 30.
Stuffed, **70**, 84.
Fish hatcheries, **59**, 20.
Fishing products:
Lines and reels, packaged, **58**, 150.
Sinkers, method of sale, **64**, 182.
Flour, **72**, 141; **73**, 50.
Gray area, **71**, 70; **72**, 83; **72**, 148; **73**, 77.
Package, **71**, 70.
Industry activities in packaging, **41**, 72.
Moisture:
Content **73**, 77.
Loss, **70**, 59; **71**, 70.
Proposal of Millers National Federation, **44**, 34.
Sale and marking, **31**, 119; **31**, 121; **56**, 199; **62**, 76.
Task Force on Commodity Requirements report, **72**, 63.
Weight variations, **37**, 7; **38**, 32; **44**, 106.
Flour Committee reports, **39**, 58; **40**, 87; **44**, 26.
Fluoride emissions, **61**, 150.
Flowmeters, electromagnetic, characteristics, **39**, 42.
Food:
Fast food, **64**, 181; **70**, 83.
Food and Drug Act, Copeland Bill revision, **25**, 119.
Market place trends in 80's, **65**, 157
Net-weight amendment, enforcement, **9**, 18; **12**, 148; **19**, 162; **24**, 158.
Precooked and prepared, **59**, 226.
Ready-to-eat, **70**, 83.
Serving-size packages, **60**, 185.
Food bags, **72**, 133.
Food and Drug Administration (FDA), **71**, 74.
Activities on short weight and deceptive packaging, **32**, 11.
Metric labeling/compliance policy guide, **73**, 367.
Package markings for essential foods, **32**, 33.
Role of, **54**, 115.
Food, Drug, and Cosmetic Act:
Quantity declaration:
Accuracy, **41**, 82; **57**, 107; **61**, 110; **62**, 78.
Legibility, **41**, 77.
Weights and measures requirements, **29**, 5; **30**, 135; **49**, 60.
Food and Drug Officials Association:
Activities, **32**, 16.
Food products, shrinkage loss, **17**, 63; **18**, 154; **33**, 55; **34**, 137; **43**, 79.
Sale of, **34**, 119.
Food Safety and Inspection Service (see Agriculture, U.S. Department).
Food scales, retail:
Specifications and tolerances, **46**, 143; **47**, 114.
Food store inspection, **35**, 36.
Food wrap, **72**, 133.
Forms (NCWM), **70**, 40; **71**, 58.
France, weights and measures administration in, **44**, 77.
Franks, **72**, 89; **73**, 77; **73**, 225.
Fraud, **73**, 52:
Suppression, **19**, 26; **23**, 86; **25**, 139.
Task Force on Prevention of, **72**, 57; **73**, 52; **73**, 97.
Freight and baggage scales:
Specifications and tolerances, **38**, 90.
Supervision, **18**, 34; **18**, 46.
Freight weighing rules, **24**, 147.
Frozen foods:
Industry history, **33**, 25.
Symposium, **33**, 17.
Sale and marking, **32**, 28; **33**, 42; **33**, 51; **34**, 113.
Standardization, **33**, 29; **33**, 39.
Survey, **33**, 35.
Symposium, **33**, 17.
Fruit and Vegetable Branch, USDA (see Agriculture, U.S. Department).

Fruits and vegetables (also see Produce):
Containers (also see Cans):
Dimensional testing, **28**, 128.
Paper cartons, sale and marking, **41**, 138; **42**, 102.
Second-hand, marking, **33**, 55.
Standardization, **12**, 89; **22**, 13; **23**, 53; **23**, 65; **32**, 18; **39**, 53; **39**, 60; **39**, 89.
Resolution, **19**, 166; **39**, 91.
Fruits and vegetables (continued):
Grade standards, **54**, 82.
Packaged vs. bulk sale, **54**, 84.
Packing, **22**, 53.
Regulation of, **20**, 133.
Sale and marking, **32**, 29.
Fuel oil:
Preheated, sale of, **37**, 72; **38**, 77; **39**, 63.
Sale of, **33**, 48; **33**, 161; **45**, 39.
Storage tanks, gaging of, **19**, 22; **22**, 96.
Fuel products, solid:
Sale of, **64**, 180.

G

Gauges and gauging, **24**, 125.
Gas pump (see Gasoline pump).
Garlic buds, sale and marking, **40**, 94.
Gasoline:
Air solubility, **22**, 112
Auxiliary tanks for checking deliveries of, **19**, 95; **23**, 88.
Contamination of unleaded, **59**, 240.
Evaporation, **15**, 111; **24**, 55.
Measurement **59**, 40; **65**, 127.
Metric conversion of, **59**, 97; **60**, 158; **63**, 180; **64**, 205; **64**, 170; **64**, 191; **64**, 240; **65**, 46; **68**, 202.
NCWM policy on, **65**, 195; **66**, 101.
Octane numbers, **63**, 41.
Research, **65**, 127.
Sale by half-gallon, **60**, 158.
Temperature correction, **59**, 181.
Temperature factor, **16**, 50; **25**, 54.
Vapor recovery, **61**, 17; **62**, 13; **62**, 184.
Vaporized, **72**, 213.
Gasoline-alcohol blends, **69**, 116, **70**, 91; **71**, 153; **72**, 147; **73**, 160.
Definition, **71**, 138.
Method of retail sale, **71**, 153.
Gasoline meters:
Air-operated installations, **22**, 104.
Ramp garage installations, **22**, 79.
Gasoline and Oil Inspection Act of California, **28**, 134.
Gasoline pump industry, **32**, 56.
Gasoline pumps (also see Liquid-measuring devices and Motor fuel dispensers):
Air releases, **23**, 105.
Digital conversion of, **57**, 124.
Hoselength, **69**, 183.
Measurement marketing, **58**, 61; **63**, 40; **64**, 241; **65**, 198; **66**, 102; **67**, 150; **68**, 304.
Meter type, operation, **33**, 79.
Modern measuring technology, view of manufacturers, **55**, 105.
Multi-tier pricing, **73**, 162; **73**, 256.
Performance, **38**, 82.
Pump labeling, **71**, 139.
Price posting:
Cash discounts, **70**, 101.
Remote, **38**, 69.
Safety precautions, **13**, 59.
Vapor recovery, **69**, 185.
Gasoline service stations:
Air towers, **55**, 127.
Inspection, **35**, 30.
Price signs, **32**, 107.
Gauges and gauging, **24**, 125.
Gems, **71**, 181.
General Accounting Office, **64**, 158; **64**, 243.
General Agreement on Tariffs and Trade (GATT), **57**, 135, **64**, 42.
Gift packages, method of sale, **60**, 184.
Gold buying:
Supervision over, **25**, 36.
Weighing of, **60**, 199.
Government Printing Office (GPO), **73**, 41.
Government reorganization, **56**, 5.
Government and technology, **55**, 13.
Graduates, glass:
Design, **9**, 126; **45**, 41.
Manufacture, **31**, 54.
Specifications and tolerances, **11**, 132; **11**, App. 1, 7; **17**, 127; **21**, 147; **34**, 151; **52**, 183; **53**, 121; **59**, 239; **62**, 190; **68**, 217.
Supervision of in pharmacies, **23**, 74.
Graduations, clear interval between, **71**, 199.
Grain:
Automatic bulk weighing systems, **71**, 189.
Hopper scales, specifications and tolerances, **42**, 79; **56**, 174; **57**, 157; **59**, 234; **63**, 112.

Model Regulation Program, **64**, 185.
Moisture measurement, **44**, 47; **46**, 45; **48**, 70.
Resolution, **43**, 106; **51**, 171.
Moisture Measurement Assurance,
Task Force on (GMMATF), **61**, 89; **61**, 150; **63**, 209; **64**, 249; **65**, 258; **66**, 203; **67**, 273.
Moisture meters, **60**, 54; **60**, 211; **63**, 135; **69**, 195; **69**, 232; **72**, 226; **73**, 265.
Minimum test, **71**, 206.
Operating range, **71**, 205.
Inspection procedure, **54**, 53.
Specifications and tolerances, **59**, 40; **66**, 176.
Tentative code, **68**, 265.
Testing, **55**, 125; **55**, 263.
OIML measurement, **60**, 138; **62**, 158; **66**, 83.
Test scales, **71**, 207; **71**, 213.
Sensitivity requirement, **72**, 192.
Tolerance values, **72**, 192.
Weighing, **12**, 140; **22**, 65; **37**, 30; **42**, 94; **42**, 97; **43**, 51.
Resolution, **16**, 139; **32**, 31; **42**, 99.
Weighing scales, specifications and tolerances, **51**, 160.
Grain Inspection Service, Federal (FGIS) (see Agriculture, U.S. Department).
Grain Standards Act: **62**, 1; **62**, 173; **63**, 173; **65**, 9.
Graphs, use of for data presentation, **23**, 95.
Gray area, **73**, 51; **73**, 75; **73**, 77; **73**, 225.
Grease-measuring devices, **20**, 70; **23**, 16.
Resolution, **20**, 134.
Specifications and tolerances, **21**, 83; **21**, 165; **22**, 71; **22**, 89; **23**, 41; **23**, 63; **24**, 141; **35**, 83; **39**, 80.
Great Britain:
Administration, **26**, 83; **49**, 18.
Consumer protection, **48**, 32.
Development of weights and measures control, **42**, 22.
History of English system of weights and measures, **50**, 128.
Measurement system, **63**, 29; **68**, 25.
Metrication, **68**, 29.
Odometer fraud, **58**, 168, **68**, 32.
Training of weights and measures officials, **36**, 15; **46**, 50.
Grocers Association, Wholesale, activities, **29**, 104.
Gross weight:
Abolition of, **16**, 69.
Manual entry capability, **73**, 134; **73**, 240.
Guidelines for recognition of moisture loss, **73**, 51; **73**, 94.
Gyroscope force balancing system; **63**, 39.

H

Ham, **72**, 89; **73**, 78.
Hand-held scales, **71**, 184.
Hassler, Ferdinand Rudolph, work of, **33**, 137.
Hawaii, weights and measures program and progress, **52**, 147.
Herbert Hoover, **59**, 35.
Hickory wood chips, sale and marking, **39**, 63.
High capacity scales, **58**, 49.
Highway weighing, **15**, 26; **19**, 151; **22**, 82; **24**, 123; **27**, 87; **38**, 25; **41**, 145; **56**, 133.
Two-draft, **28**, 63.
History of weights and measures in the United States, **1**, 6.
Holbrook, Fay Stanley, tribute to, **30**, 1.
Hopper scales other than grain (for specific type of hopper, see entry for that type), **71**, 178.
Hopper scales (continued):
Design criteria and tolerances, **72**, 193.
Shift test, **72**, 190.
Hot dogs, **72**, 89; **73**, 77; **73**, 225.
Household goods, uniform weight certificates for shipment, **40**, 125.
Household moving scales, **59**, 242; **64**, 220.
Humidity, **71**, 186; **72**, 197.
Humidity test, **71**, 210.
Hundredweight for sale of grain, **42**, 94; **42**, 97; **43**, 51; **45**, 33.
Resolution, **42**, 99; **46**, 117.
Hydrocarbon gas device, **71**, 202.
Hygroscopic products:
Inspection of, **52**, 161.
Moisture loss litigation, **60**, 186; **61**, 25; **62**, 100.

I

Ice:
Scoring machines, **20**, 22.
Shortages in sales, **12**, 77.
Ice cream and similar frozen products, **70**, 86; **71**, 149.
Frozen dessert novelties, **70**, 86; **71**, 150.
Method of sale, **64**, 178; **64**, 212; **66, 99; 67**, 93; **68**, 179; **69**, 110; **71**, 150.
Packaging, **64**, 184.
Regulation in Wisconsin, **18**, 137.

Ice Cream Packaging (continued):
Sale by liquid measure, **33**, 73.
Resolution, **20**, 132.
Sale by weight, **18**, 115; **19**, 146; **32**, 28; **32**, 38; **36**, 35; **37**, 48; **70**, 86.
Resolution, **18**, 184.
Standard for, **18**, 135.
Sticks:
Net weight marking, **36**, 97.
Net weight or volume marking, **37**, 58.
Ice cream containers:
Factory-packed, sale and marking, **32**, 28; **32**, 41.
Liners, **39**, 63.
Standardization, **22**, 24.
Resolution, **23**, 144.
Terms, extraordinary, **40**, 94.
Testing, **38**, 20.
Ice cream measure-containers, prepackaged:
Specifications and tolerances, **36**, 103; **37**, 76.
Identification:
By precision, **22**, 49.
Weighing devices, **70**, 106.
Identity, **71**, 143.
Immersed balances, **69**, 18.
Incense, **63**, 151.
Inch, standardization, **28**, 2.
Incorrect device, sale of, **72**, 124.
Index of Device Evaluations, **70**, 53; **71**, 65.
Indicating elements, marking, **72**, 186; **73**, 133.
Indicating/recording elements:
Multiple, **71**, 179.
Single, **71**, 179.
Indications, **73**, 237.
Agreement between, **72**, 209; **73**, 255.
Dual, **71**, 173.
Multiple, **71**, 180.
Zero, **70**, 107; **71**, 173; **72**, 183.
Indicators, remote (slave), marking, **73**, 57.
Industrial scales:
Aspects of, **33**, 107; **59**, 90.
Impact of formal specifications, **34**, 97.
Selection and maintenance, **11**, 51.
Industry development, **21**, 99; **49**, 129; **50**, 121.
Information crisis, **56**, 22.
Information Systems, Task Force on, **70**, 49.
Ink, sale of, **33**, 54.
In-motion weighing devices (see Weighing devices).
Insecticide Act, provisions of, **19** 165.
Insecticides, sale and marking, **33**, 54.
Inspection:
Evaluation, **58**, 108
Examination procedure outlines (EPO's) **60**, 167.
Pilot program, **58**, 109.
Variable Frequency, Model Regulation, **63**, 195.
Instant concentrated products:
Method of sale, **61**, 233; **62**, 219.
Institute for Applied Technology, NBS,Activities, **49**, 6; **56**, 111.
Institute for Weights and Measures, **65**, 244; **66**, 31; **66**, 190; **66**, 224; **67**, 229.
Instrument Society of America, **50**, 69.
Insulation:
Method of sale, **61**, 240; **62**, 225; **63**, 148; **64**, 175; **68**, 180.
R value of, **62**, 31.
Internal Revenue Service (IRS), role of, **54**, 126.
International Bureau of Weights and Measures, **17**, 81.
International Committee on Weights and Measures, **23**, 4; **24**, 4; **42**, 3; **57**, 35.
International Conference on Weights and Measures, **22**, 3; **37**, 19; **38**, 72; **46**, 5.
International Organization of Legal Metrology (OIML), **43**, 16; **47**, 127; **48**, 77; **55**, 22; **56**, 21; 69, 57; **69**, 237; **72**, 46; **72**, 70; **71**, 231; **71**, 232.
Activities and objectives, **57**, 32; **57**, 40; **58**, 133; **59**, 201; **60**, 28; **60**, 146; **63**, 111; **63**, 136; **64**, 1; **64**, 217; **65**, 14; **65**, 188; **66**, 82; **66**, 315; **67**, 67; **72**, 230; **73**, 270.
Certification mark, **63**, 135.
Impact upon U.S., **60**, 139; **60**, 148; **63**, 112; **63**, 156.
Industry viewpoints of, **62**, 64.
Participation on OIML committees, **73**, 54.
Program update, **73**, 53.
Prepackaged products, **69**, 237.
NCWM, **57**, 38; **59**, 26; 60, 146; **62**, 159; **64**, 160; **66**, 82; **68**, 100.
Reports, **58**, 1; **59**, 8; **61**, 200; **62**, 156; **62**, 249; **63**, 135; **64**, 162; **64**, 218; **66**, 80; **66**, 171.
U.S. Advisory Committee for, **60**, 146; **60**, 218; **62**, 157; **63**, 135; **64**, 161.
International Organization for Standardization, **57**, 7.
International program of legal metrology, **39**, 69.
Resolution, **39**, 90.
International symbols, **73**, 237.
Interstate commerce, preemption, federal-state, **51**, 41.
Interstate shipment of containers and package, **19**, 160; **22**, 9; **36**, 74.
Retail, quantity labeling, **52**, 163.
"Intrastate," use of the term, **70**, 79.
Investigation of weights and measures by the National Bureau of Standards:
Reports, **5**, 101; **6**, 41; **7**, 89.
Resolution, **5**, 105.
Investigation, technical, development of, **49**, 51.
Invoice, written, **72**, 218.
Printed ticket, **72**, 218.
Issues Roundtable, **72**, 52.

J

Japan:
  Administration in, **47**, 38.
  Metric system transition, **47**, 31.
Jensen, M. W.:
  Resolution, **54**, 236.
  Tributes to, **52**, 38; **54**, 113; **55**, 32.
Jewelers' scales, **71**, 181; **71**, 185; **73**, 251.
  Maintenance, **9**, 39.
  Specifications and tolerances, **52**, 170; **53**, 116; **56**, 173; **60**, 199; **62**, 167.
Jewelry, fraudulent marking, **17**, 140.
Job descriptions, **41**, 101.
Joint Executive Committee and Committee on National Measurement Policy and Coordination, Reports, **68**, 69.

K

Kerosene, method of sale, **68**, 186.
Keyboard adjustments, **71**, 182.
Kilowatt (definition), **72**, 251.
Kindling wood, sale of, **32**, 31; **32**, 44.

L

Labeling regulations:
  Food, **63**, 42.
  Metric, **59**, 43.
  Net weight, **59**, 221.
  Paint, **57**, 144.
  USDA, **58**, 138.
Labels, manufacture of, **29**, 121.
  Under Fair Packaging and Labeling Act, **53**, 61.
Laboratory:
  Auditing program, **69**, 39.
  Authorization, **70**, 53
  Intercomparisons, **72**, 84.
  Metrology, **63**, 17.
  Participating, **71**, 108.
  State program, **70**, 24.
Ladder measurement and labeling, **52**, 81.
Landlord/tenant, **73**, 114.
Landscaping materials, **73**, 159.
Large-capacity meters, **71**, 196.
Large-capacity scales:
  Digital, **52**, 48; **58**, 42.
  Pivets and bearings, greasing of, for protection, **30**, 86.
  Repair, **22**, 33; **34**, 68.
    Resolution, **22**, 145.
  Specifications and tolerances, **26**, 122; **27**, 75; **27**, 90; **28**, 26; **28**, 115; **29**, 72; **29**, 133; **29**, 140; **30**, 110; **30**, 112; **31**, 105; **33**, 101; **38**, 90; **42**, 77; **43**, 63; **44**, 82; **5**, 94; **46**, 145; **47**, 115; **51**, 156; **54**, 178; **56**, 174; **58**, 43.
  Standardization, **29**, 1.
  Testing location, **73**, 59.
Latin American countries:
  NBS contribution, **49**, 48.
  Weights and measures of, **12**, 125.
Laundry driers (timers), **71**, 204.
Laundry scales, **73**, 253.
Law enforcement, philosophy of, **45**, 87.
Law, Uniform or Model, on Weights and Measures, **2**, 53; **3**, 64; **3**, 69; **3**, 107; **6**, 110; **6**, 151; **8**, 225; **8**, 275; **10**, 109; **10**, 189; **10**, 235; **14**, 131; **16**, 116; **18**, 152; **20**, 92; **21**, 77; **26**, 32; **26**, 92; **30**, 180; **32**, 113; **35**, 27; **59**, 218; **60**, 173; **61**, 227; **62**, 211; **65**, 202; **66**, 87; **67**, 85; **67**, 274; **68**, 132; **69**, 104.
  Industry viewpoint on, **51**, 26.
  Legal considerations, federal-state preemption, **51**, 41.
  Reference to Handbook 67, **73**, 149.
  Relationship with NTEP and Handbook 44, **70**, 54.
  Resolution, **4**, 59.
  Revision of 1951, **36**, 58; **39**, 51; **40**, 78; **41**, 126; **43**, 46; **43**, 49.
  Revision of 1959, **44**, 113; **45**, 87; **46**, 160; **47**, 52; **48**, 90; **51**, 145; **52**, 164; **53**, 124; **54**, 210; **55**, 265.
  Revision of 1971, **56**, 118.
Lawn bags, **72**, 133.
Lawn dressings, sale of, **32**, 32; **52**, 166.
Laws and regulations:
  Adoption by citation, **64**, 189; **67**, 170.
  Enforcement of, **51**, 33.
  Europe in the 80's, **65**, 95.
  Model Handbook, **64**, 188.
  Modernization of, **43**, 115.
  State and local unification, **65**, 64.
Laws and Regulations Committee, National Committee:
  Reports, **41**, 135; **42**, 100; **43**, 46; **44**, 111; **45**, 32; **46**, 155; **47**, 50; **48**, 87; **49**, 192; **50**, 184; **51**, 145; **52**, 159; **53**, 124; **54**, 209; **55**, 265; **56**, 188; **57**, 137; **58**, 146; **59**, 218; **60**, 173; **61**, 222; **62**, 210; **63**, 145; **64**, 173; **65**, 202; **66**, 87; **67**, 69; **68**, 117; **69**, 98; **70**, 73; **71**, 131; **72**, 115; **73**, 144.

Leather-measuring devices, testing, **15**, 44.
Legal metrology:
Control system, **68**, 100.
National and international strategy, **68**, 14.
Tools for measurement assurance, **63**, 48; **68**, 138.
Legal Metrology, International Bureau of, **65**, 188.
Legal Metrology, International Committee of, **60**, 100.
Legislation Committee:
Establishment and resolution on, **29**, 145.
Reports, **30**, 163; **31**, 110; **32**, 52; **33**, 123; **34**, 19; **35**, 21; **36**, 58; **37**, 43; **38**, 67; **39**, 50; **40**, 78. [Legislation Committee was consolidated with Committee on Methods of Sale of Commodities in 1956 to form new Committee on Laws and Regulations.]
Length, measurement of, yesterday, today and tomorrow, **50**, 154.
Length standards, testing, **20**, 28.
Letters, minimum height (for metric symbols), **73**, 154.
Level-indicating means, **72**, 185; **73**, 135.
Liaison Committee, National Conference:
Mission, **61**, 221; **66**, 202, **68**, 299.
Name change, **62**, 160; **67**, 233; **67**, 279.
Reports, **51**, 143; **52**, 158; **53**, 106; **54**, 162; **55**, 225; **56**, 156; **57**, 131; **58**, 133; **59**, 199; **60**, 218; **61**, 213; **62**, 248; **63**, 197; **64**, 238; **65**, 249; **66**, 195; **69**, 230; **70**, 188; **71**, 226; **72**, 281; **73**, 361.
Role, General, **72**, 53.
Retirees, **72**, 54.
Light bulbs, labeling of, **28**, 13.
Resolution, **27**, 111.
Linear measures:
Specifications and tolerances, **8**, 210; **9**, 57; **9**, 63; **10**, 193; **11**, App. 1, 4; **17**, 127; **21**, 148; **24**, 91; **36**, 105; **39**, 77; **54**, 194; **57**, 170.
Linseed oil, sale and marking, **31**, 120; **31**, 124.
Liquefied gases in cylinders, **72**, 134.
Liquefied natural gas, **59**, 15; **62**, 158.
Liquefied petroleum gas (LPG), **71**, 154; **72**, 137.
Cylinder, **73**, 160.
Tare weights, **65**, 208.
Dispensers, stationary, discharge rates, **72**, 221.
Distribution, **33**, 86.
Measurement:
Instruments for, **30**, 62; **36**, 22.
Physical properties, **30**, 48; **35**, 73.
Problems of distribution industry, **30**, 65.
Resolution, **30**, 179.
Units, **34**, 22; **34**, 36.
Metering, panel discussion on, **54**, 58.
Meters:
Normal test, **72**, 224.
Permanence test, **72**, 244.
Products packaged in disposable cylinders, checking of, **55**, 134.
Sale of, **33**, 45; **36**, 128; **66**, 98.
Liquefied petroleum gas liquid-measuring device:
Definition, **72**, 224.
Metric conversion, **65**, 227.
Seals, approval, **39**, 51.
Specifications and tolerances, **37**, 83; **38**, 89; **41**, 154; **42**, 87; **43**, 66; **49**, 184; **52**, 182; **54**, 187; **55**, 254; **56**, 181, **57**, 166; **58**, 156; **60**, 205; **64**, 207; **65**, 226; **68**, 271; **69**, 192.
Temperature-compensated, **45**, 32; **45**, 64.
Testing and testing equipment, **30**, 71; **31**, 21; **34**, 28; **35**, 53; **35**, 62; **39**, 52; **40**, 51; **40**, 59; **40**, 68; **40**, 70; **42**, 72; **67**, 213.
NBS meter prover, **42**, 75.
Resolution, **40**, 124.
Vapor meters, permanence test, **72**, 245.
Zero-set-back interlock, **71**, 201.
Liquefied petroleum gas vapor-measuring devices:
Specifications and tolerances, **54**, 197; **55**, 254; **57**, 166; **69**, 193.
Testing, **49**, 150.
Liquid commodities, agri-chemical:
Measuring devices and systems, **68**, 269; **69**, 189.
Liquid feed supplements and heavy oils, **59**, 241.
Liquid feeds and fertilizers, **71**, 192.
Liquid hydrocarbons (see (1) Gas, (2) Petroleum).
Liquid-in-glass thermometers (see Thermometers).
Liquid-measuring devices (also see Gasoline; Gasoline meters; Gasoline pumps), **73**, 274.
Carbon dioxide, **72**, 205.
Characteristics of, **11**, App. 2, 3.
Code, **72**, 205; **73**, 255.
Future designs, **62**, 175.
Metrification of, **64**, 205; **65**, 227.
Money-value computations, **61**, 186; **63**, 180; **65**, 198; **69**, 181.
Nontemperature-compensated wholesale meters, **69**, 186.
Performance of, **21**, 126; **38**, 82; **38**, 95.
Regulation of, **12**, 169.
Servicing, **31**, 21.
Sight glasses, **20**, 95; **30**, 15; **40**, 79.
Specifications and tolerances, **8**, 211; **10**, 196; **11**, App. 1, 10; **12**, 184; **12**, 223; **13**, 64; **13**, 83; **13**, 127; **13**, 142; **13**, 193; **14**, 90; **14**, 104; **14**, 116; **14**, 119; **14**, 123; **15**, 120; **17**, 133; **19**, 127; **20**, 102; **21**, 128; **22**, 70; **22**, 101; **23**, 123; **24**, 91; **24**, 140; **24**, 147; **25**, 82; **25**, 101; **26**, 100; **26**, 130; **27**, 103; **29**, 123; **29**, 64; **30**, 98; **31**, 104; **32**, 86; **33**, 95; **33**, 98; **34**, 152; **35**, 83; **36**, 108; **37**, 86; **39**, 79; **42**, 80; **43**, 65; **44**, 84; **45**, 97; **46**, 148; **47**, 117; **48**, 103; **49**, 180; **50**, 198; **51**, 162; **52**, 180; **53**, 118; **54**, 180; **55**, 246; **56**, 176; **58**, 164; **59**, 235; **60**, 201; **61**, 190; **62**, 175; **63**, 37; **64**, 220; **65**, 223; **66**, 154.
Temperature compensation, **69**, 237; **71**, 200.
Testing of, **11**, App. 2, 3; **14**, 64; **15**, 115; **21**, 104; **30**, 121; **36**, 27.
Type approval problems, **20**, 64.

Liquid-measuring devices (continued):
Visibility of indications, **31**, 108.
Wholesale:
Testing drafts for, **38**, 95.
Tolerances for, **38**, 94; **42**, 83.
Liquids, measurement of:
Today, **50**, 58.
Tomorrow, **50**, 63.
Yesterday, **50**, 39.
Livestock scales, **70**, 110.
Sensitivity, **72**, 196.
Specifications and tolerances, **33**, 100; **33**, 101; **33**, 103; **38**, 90; **39**, 87; **41**, 150; **45**, 97; **46**, 141; **47**, 116; **50**, 198; **51**, 159; **53**, 113; **53**, 117; **54**, 174; **59**, 231; **63**, 171.
Testing of, **18**, 55; **19**, 40; **34**, 50; **35**, 111.
Shift test, **70**, 109.
Livestock weighing, **19**, 40; **38**, 46; **38**, 50; **39**, 19; **40**, 47; **44**, 125.
Load Capacities, posting on trucks, **61**, 246.
Load cells, **72**, 188; **72**, 235; **73**, 56; **73**, 126.
Assemblies, **73**, 56.
Families, extension of range, **73**, 57.
Marginal test data, **73**, 57.
Marking requirements, **72**, 113; **72**, 187; **73**, 127.
Minimum dead load output (MDLO), **73**, 131.
Temperature effect on, **73**, 137.
Multiple applications, **73**, 56; **73**, 65; **73**, 131.
v_{min} values, **73**, 137.
NTEP test procedures, **72**, 200; **72**, 236.
Range of capacities covered by Certificate of Conformance, **72**, 109.
Relabeled, **73**, 58.
Repair or remanufacture, **73**, 61; **73**, 130.
Repeatability of test data, **73**, 130.
Temperature effect on, **73**, 56.
Test loads, **73**, 57.
Test procedures, **72**, 112.
Testing, **72**, 235.
Verification scale division, **73**, 127.
Minimum verification scale division, **72**, 127.
Load-cell scales, **38**, 52; **60**, 61; **62**, 9; **62**, 158.
Specifications and tolerances, **40**, 118.
Load-receiving elements (design of), **71**, 174.
Load tests, simulated, **72**, 203.
Loading rack meters, **71**, 196; **71**, 194; **72**, 210.
Loadometers, **38**, 25.
Log rules (see Lumber).
Logo, NCWM (see National Conference on Weights and Measures).
Logo, NTEP (see National Type Evaluation Program).
Lubricants, gear, sale and marking, **39**, 62.
Lubricating oil:
Bottles, **19**, 17; **24**, 15.
Drainage characteristics, **24**, 22.
Resolution, **19**, 170; **23**, 144.
Specifications and tolerances, **20**, 71; **20**, 137; **21**, 142; **22**, 70; **23**, 124; **24**, 27; **24**, 178; **25**, 103; **32**, 86; **34**, 151; **61**, 196; **64**, 214.
Cans, **25**, 65.
Drainage characteristics, **26**, 76.
Quantity checking, **41**, 71.
Sale and marking, **33**, 48; **36**, 95.
Lumber:
Artificial burning logs, **61**, 236.
Cord, definition, **66**, 94.
Fireplace and stove wood, **60**, 177.
Kiln dried hardwood, **61**, 52; **61**, 242; **62**, 224.
Log rules, **23**, 128.
Model regulation pertaining to dimensions, **55**, 275; **56**, 200.
Sale of, **12**, 61; **18**, 72.
Softwood:
Metrication, **61**, 234.
Sale of, **61**, 234; **64**, 179; **65**, 208.
Luncheon meats, **72**, 89; **73**, 79; **73**, 225.

M

Mail order shipping, **62**, 51; **63**, 148; **64**, 175.
Malt beverages, nonalcoholic, **72**, 295.
Management information systems, **55**, 180.
Management as a modern approach, **56**, 31.
Manometers, liquid, **63**, 73.
Manufactured devices, conformance, **73**, 59.
Manufactured gas, **71**, 202.
Margarine and margarine-like "spreads", sale of, **43**, 49; **56**, 199; **64**, 182; **66**, 96; **67**, 90; **68**, 303; **70**, 82; **71**, 146.
Marking:
Certificate of Conformance, **73**, 58.
Key markings and symbols, **73**, 134.
"Not legal for trade," **73**, 254.
Symbols and international symbols, **73**, 237.
Maryland law, **36**, 31.
Mass calibration:
Surface-dependent thermal effect, **68**, 39.
Mass comparators, **69**, 18.
Mass flow meters, **71**, 191; **71**, 203; **72**, 213.
Definition, **72**, 209; **72**, 224.
Field testing, **72**, 207.
Mass research, **69**, 17.

Mass standards, **36**, 42.
Office standards, testing, **19**, 103.
Precision standards, manufacture and uniformity of design, **15**, 102.
Mass units for metering (recognition), **72**, 205.
Matches, sale and marking, **31**, 120; **31**, 126.
Materials testing machines, **69**, 237.
Mattress pads, **73**, 155.
Maximum Allowable Variation (MAV), **63**, 145; **64**, 20; **69**, 135; **71**, 155; **72**, 140.
MAV's and Sampling Plans, **72**, 140.
Category A, **73**, 74.
Category B, **73**, 74.
Maximum test loads (see Test loads).
Measure-containers:
Paper, regulation of, **28**, 44.
Single-service:
Specifications and tolerances, **29**, 134; **30**, 97; **31**, 102; **32**, 81; **33**, 97; **49**, 186; **53**, 121; **54**, 192; **55**, 256.
Measurement assurance, **50**, 73; **59**, 2; **64**, 32.
Measurement center, state, development of, **53**, 97; **56**, 139.
Measurement Policy and Coordination, National Committee, **60**, 226.
Measurement science, university curriculum, **49**, 15.
Measurement system,
National, **52**, 7; **66**, 79; **67**, 56.
State and local, **60**, 36; **60**, 222; **65**, 249; **66**, 195; **67**, 223.
Measures:
Capacity (see Dry measures; also see Liquid measures).
Linear (see Linear measures).
Measuring technology:
Forums on, **54**, 53; **55**, 99; **56**, 116.
Gasoline pump manufacturers; viewpoint, **55**, 109.
Meter manufacturers' viewpoint, **55**, 100.
Meat and meat products (also see Packing house products), **71**, 71; **73**, 50; **73**, 77.
Corned beef, **73**, 78.
Federal regulation of, **26**, 132; **35**, 148; **36**, 88; **36**, 89; **49**, 74.
Franks, **72**, 89; **73**, 77; **73**, 225.
Ham, **72**, 89; **73**, 78.
Hot dogs, **72**, 89; **73**, 77; **73**, 225.
Labeling and packaging, **57**, 70; **61**, 29; **61**, 231.
Net weight marking, **12**, 145; **14**, 45; **20**, 127.
Resolution, **11**, 158; **12**, 147.
Luncheon meats, **72**, 89; **73**, 79; **73**, 225.
Method of sale, **59**, 222; **62**, 217; **65**, 205; **67**, 91; **70**, 83.
Moisture loss, **70**, 59.
Packaging and labeling, **57**, 110.
Packaged at Federally inspected plants, **73**, 171; **73**, 222.
Pickled, sale and marking, **32**, 37.
Meat and meat products (continued):
Prepackaging of, **35**, 84; **35**, 89; **36**, 71.
Marking, **35**, 91; **37**, 62.
Quantity control on production lines, **43**, 97.
Raw meats, **73**, 78.
Red meat, **70**, 59.
Sale and marking, **56**, 199; **69**, 108.
Beef, sale by hanging weight, **54**, 73.
Carcass, side or primal cut, **70**, 89.
Gross weight, **40**, 95.
Net weight, **31**, 119; **62**, 80; **63**, 100; **63**, 138; **64**, 138; **68**, 302.
Piece, **39**, 62.
Plastic wrappings and casings, **36**, 94; **37**, 73; **37**, 76; **40**, 95; **44**, 112.
Resolution, **39**, 91.
Sausage, **72**, 89; **73**, 78; **73**, 79; **73**, 225.
Shrinkage problems, **20**, 121, **21**, 124.
Small packages (less than 1/2 oz), **72**, 128.
Stuffed, **70**, 84.
Wholesale labeling, **35**, 148; **36**, 88.
Wholesale Meat Act, **59**, 164; **62**, 76; **62**, 163.
Mechanics (see Servicemen).
Memorandum of Understanding, Model Agreement between a State or Local Government and Food Safety and Inspection Service (see Agriculture, U.S. Department).
Merchandising:
Art of, yesterday, today and tomorrow, **50**, 141.
Forums on, **54**, 73; **56**, 74.
Mercury-in-glass thermometer (see Thermometers).
Meter industry, challenge of the 70's, **55**, 100.
Meters (for a specific type of meter, see entry for that type):
Continuous density, liquid and gas, **62**, 158.
Dry gas, testing, **8**, 90; **21**, 54.
Positive displacement in liquid hydrocarbon service, **32**, 71.
Slow-flow, specifications and tolerances, **48**, 103; **49**, 180; **49**, 183.
Utility, regulation of, **26**, 144.
Metric conversion, **58**, 2; **58**, 169; **58**, 136; **59**, 61; **59**, 199; **60**, 6; **60**, 211; **61**, 222; **62**, 210; **63**, 147.
Australia, **62**, 62, 130.
Canada, **59**, 87; **59**, 118.
Industry viewpoint, **59**, 93.
Model State Plan, **63**, 199.
Metric labeling/FDA compliance policy guide, **73**, 367.
Metric system, **9**, 27; **6**, 3; **1**, 184; **12**, 112; **43**, 52; **43**, 57; **49**, 55; **53**, 79; **62**, 249; **63**, 197.
Converting metric to inch-pound quantities, **73**, 153.
Education and training programs, **56**, 151; **58**, 143; **59**, 116; **60**, 166; **61**, 69; **61**, 163; **62**, 242.
Impact of metrication, **56**, 22.

Metric system (continued):
Japan's transition, **47**, 31.
Metric Conversion Act, **61**, 133; **64**, 169; **61**, 168.
Metric System Act, Uniform, **65**, 195.
Organizations:
American National Metric Council, **59**, 54; **61**, 56; **61**, 207; **62**, 151.
Metric Board, U.S., **61**, 157; **62**, 151; **63**, 104; **63**, 199; **64**, 91; **64**, 159; **64**, 251; **65**, 45; **65**, 193; **66**, 176; **67**, 61.
Metric Board, State, **62**, 104; **63**, 197.
NCWM Committee on Metric Planning, **59**, 205; **62**, 225.
National Metric Conversion Board, **57**, 8; **59**, 114; **59**, 125.
Packaging and labeling, **58**, 108; **59**, 116; **65**, 116; **66**, 96.
Resolutions, 11, 178; **11**, 192; **12**, 210; **48**, 94; **56**, 218.
Spelling issue, **59**, 121; **60**, 166; **60**, 226; **61**, 207; **63**, 150; **64**, 185; **64**, 247; **65**, 194.
Study:
Resolution, **54**, 236.
Role of Weights and Measures Officials, **55**, 105.
Survey on Weights and Measures, **55**, 201.
Symbol Representation, **62**, 172.
Metrication, **57**, 138; **59**, 64; **59**, 219; **60**, 178; **61**, 63; **61**, 205; **62**, 237.
U.S., **61**, 53; **67**, 65.
Metrology, Automated, advanced, **71**, 28.
Metrology Workshops, **70**, 239; **72**, 304.
Metrological characteristics (proposed definition), **73**, 239.
Michigan, **73**, 21.
Mileage-measuring devices:
Specifications and tolerances, **39**, 77; **42**, 89; **47**, 123; **48**, 106; **49**, 187.
Military establishments:
Inspection in, **54**, 91; **55**, 227; **56**, 158.
Resolution, **55**, 285.
Milk and cream:
Babcock test for fat determination, **19**, 13.
Concentrated milk, sale of, **36**, 93; **37**, 72.
Machine measurement, **36**, 67.
Packaging of, **43**, 49; **53**, 54; **56**, 200.
Milk and cream bottles, **61**, 75; **64**, 220.
Capping system, Dacro P-38, **32**, 92.
Filling, **16**, 43; **32**, 66.
Marking, **30**, 168.
Paper cartons, **27**, 115; **31**, 109; **32**, 66; **33**, 154; **40**, 103.
Checkweighing, **38**, 22.
Plastic, **51**, 17.
Milk and cream bottles (continued):
Specifications and tolerances, **9**, 58; **9**, 73; **9**, 113; **10**, 140; **10**, 147; **10**, 196; **11**, 134; **11**, App. 1, 11; 128; **22**, 121; **25**, 99; **26**, 128; **31**, 103; **32**, 83; **48**, 106; **49**, 186; **51**, 165; **52**, 183; **54**, 193.
Standardization, **15**, 30; **17**, 26; **32**, 29.
Resolution, **15**, 125; **17**, 138.
Ten-ounce, **44**, 112.
Testing, **16**, 47.
Milk Bottles Code, **73**, 263.
Milk marketing, federal regulation of, **49**, 80.
Milk meters, **72**, 284; **73**, 364.
Investigation of, **47**, 22.
Specifications and tolerances, **48**, 104; **62**, 178.
Milk products, **72**, 131.
Method of sale, **60**, 175; **61**, 231; **66**, 98; **67**, 92.
Milk tanks, farm (see Farm milk tanks).
Mine scales:
NBS investigation, **12**, 161; **13**, 182; **14**, 57.
Specifications and tolerances, **38**, 90.
Modules (training) (see National Training Program).
Moisture content laboratory test, **72**, 155.
Moisture loss, **70**, 59; **70**, 79; **71**, 70; **73**, 75.
Allowances for variations due to, **73**, 171.
Guidelines, **73**, 51; **73**, 94.
Variations resulting from exposure ("moisture loss variation"), **70**, 81.
Moisture-test scales:
Specifications and tolerances, **34**, 159.
Money values (LPG and anhydrous ammonia liquid-measuring devices code), **73**, 259.
Monorail scales, **71**, 178.
Shift test, **70**, 109.
Specifications and tolerances, **61**, 181.
Mops and mopheads, sale and marking, **36**, 97.
Motor fuels:
Certification, **71**, 136.
Policy and guidelines, **70**, 101.
Registration, **71**, 136; **72**, 145.
Retail dispensers (see Motor fuel dispensers, retail).
Spark ignition, **71**, 138.
Specifications, **72**, 147.
Task Force on, **69**, 53, **70**, 48; **70**, 210; **71**, 235.
Testing laboratory, **72**, 158.
Uniform Motor Fuel Inspection Law, **71**, 135; **72**, 121; **72**, 144.
Uniform Motor Fuel Law and Regulation, **71**, 134.
Uniform Regulation for Motor Fuel, **71**, 138; **72**, 121; **72**, 147.
Motor fuel dispensers, retail:
Blending type, **71**, 193.
Card activated, **72**, 245.
Cash/credit sales, **70**, 100; **73**, 163.
Cash discount price posting, **73**, 161; **73**, 164.
Discount, **73**, 164.

Motor fuel dispensers (continued):
Dispenser labeling, **71**, 153.
Multi-tier pricing, **73**, 162; **73**, 256.
Permanence test, **72**, 243.
Price posting, **69**, 137; **70**, 100.
Pump labeling, **71**, 139.
Selectable unit price capability, **71**, 198.
Surcharge, **73**, 164.
Motor oils:
Packaging, **59**, 220.
Motor vehicle scales, **59**, 232.
Mulch, bark, **73**, 173; **73**, 374.
Compaction, **73**, 174.
Definition, **72**, 137.
Labeling, **67**, 145.
Method of sale, **66**, 182.
Test measure, **73**, 174.
Multi-range scales, **71**, 186.
Mussels, method of sale, **70**, 85; **71**, 147.

N

National Advertising Program, **68**, 278.
National Association of State Departments of Agriculture:
Activities, 44, 73; **45**, 12; **47**, 75; **48**, 60; **54**, 148; **67**, 24.
Weights and Measures Division, organization and functions, **49**, 114; **52**, 16.
National Bureau of Standards:
Activities and services, **12**, 15; **23**, 2; **24**, 5; **32**, 7; **35**, 1; **38**, 4; **39**, 3; **39**, 39; **40**, 4; **40**, 50; **41**, 3; **43**, 9; **45**, 7; **46**, 7; **47**, 3; **48**, 4; **49**, 1; **49**, 6; **49**, 38; **50**, 6; **51**, 1; **52**, 7; **53**, 7; **54**, 6; **56**, 111; **59**, 10; **59**, 20; **59**, 38; **60**, 42; **60**, 123; **61**, 135; **63**, 1; **66**, 8; **69**, 16.
Film, "Standards for Excellence," **61**, 159; **62**, 243.
NCWM sponsorship, **68**, 8; **68**, 36.
Organic Act, **60**, 124; **67**, 238.
Publications, **73**, 41.
Resolution on support of, **43**, 106.
75th anniversary conference host, **61**, 226.
National Certification Program, **66**, 193; **67**, 216; **68**, 278.
National Conference of Standard Laboratories, **60**, 33.
National Conference of State Legislatures (NCSL), **60**, 33; **61**, 84.
National Conference on Weights and Measures (NCWM):
Interaction with Ad Council, **66**, 25; **66**, 192; **67**, 230.
Addresses of the Conference Chairman, **57**, 1; **58**, 1; **59**, 1; **60**, 1; **62**, 60; **63**, 78; **69**, 11; **70**, 6; **71**, 39; **72**, 32; **73**, 28.
Budget and finance, **69**, 68.
Budget development, **70**, 39.
Financial report, **70**, 39.
Grant budget, **73**, 45.
Operating budget, **73**, 45; **73**, 69.
Chairman-Elect, **70**, 33.
Committee structure, **40**, 19; **70**, 33.
Constitution and Bylaws, **69**, 63; **70**, 32.
Directories, **73**, 41.
NCWM (continued):
Follow-through on Conference actions, **43**, 120; **65**, 1; **66**, 1; **67**, 1.
Forms, **70**, 40; **71**, 58.
Functions and objectives, **50**, 24; **60**, 128; **60**, 143; **66**, 10.
Honors and awards, **58**, 13; **60**, 13; **61**, 137; **62**, 125; **65**, 12; **66**, 21; **67**, 18; **68**, 16; **69**, 35.
Incorporation, **69**, 53.
Insignia, **30**, 167; **31**, 52; **32**, 122.
Logo, **70**, 33.
Meetings:
Agenda items, submission of, **72**, 53.
Interim, agenda items, submission date, **73**, 42.
Membership, **64**, 26; **64**, 225; **67**, 19; **68**, 84; **69**, 57; **71**, 35; **73**, 42.
Advisory members, **70**, 35.
Associate members, **70**, 36.
Associate Membership Committee, **54**, 157.
Reports of, **55**, 280; **56**, 215.
Directory, **70**, 42.
Retired, waiving of registration fee, **72**, 56.
Options, **71**, 54.
Promotion, **70**, 37.
Metric conversion position, **66**, 99; **67**, 44.
Mailing list, **73**, 41.
Organization and procedure, **2**, 6; **25**, 142; **34**, 4; 34, 95; **42**, 19; **45**, 145; **46**, 118; **47**, 126; **50**, 175; **53**, 104; **54**, 157; **56**, 213; **62**, 140; **62**, 148; **63**, 130; **66**, 100; **68**, 69; **68**, 77; **68**, 81; **68**, 113; **69**, 50.
Report of Study Committee, **42**, 14.
Resolution, **1**, 46; **2**, 57.
Policy and guidelines, **70**, 34.
Proceedings index, **69**, 56.
Program planning and evaluation, **60**, 167; **63**, 55; **63**, 192; **65**, 243; **66**, 191; **67**, 230; **68**, 278.
Promotional activities, **58**, 40; **59**, 211; **64**, 224; **65**, 242.

Publications (see NCWM Publications; also see Publications adopted by NCWM), **70**, 40; **71**, 58.
Recording of sessions, **63**, 193.
Regional association relations (see Regional associations).
Registration lists, **57**, 188; **58**, 180; **59**, 252; **60**, 242; **61**, 266; **62**, 266; **63**, 235; **64**, 274; **65**, 281; **66**, 263; **67**, 298; **68**, 335; **69**, 317; **70**, 240; **71**, 251; **72**, 306; **73**, 386.
Special recognition:
Career change, **71**, 52.
President's award (see Awards).
Retirees, **71**, 52.
Voting--Consequences, **71**, 52.
Waiver of registration fee, **71**, 52; **72**, 56.
National economy, **43**, 2; **44**, 2; **45**, 3; **48**, 63; **58**, 14.
National Marine Fisheries Service, **72**, 285.
National Measurement Policy and Consumer Service, Committee on, **61**, 202.
National Measurement Policy and Coordination, Committee on:
Reports, **60**, 226; **61**, 202; **62**, 140; **63**, 132; **64**, 158; **65**, 180; **66**, 53; **67**, 33.
National Metrological Control Program, **65**, 180.
National Technical Information Service (NTIS), **73**, 41.
National Training Program (NTP), **70**, 23; **70**, 46; **71**, 33; **71**, 218; **72**, 46; **72**, 267; **73**, 49; **73**, 315.
Certification plan, **71**, 221.
Criteria for instructors, **72**, 275.
NTP Certification Program, **71**, 221; **73**, 317.
Registry, **71**, 223; **73**, 317.
Training modules, **71**, 33; **71**, 219; **73**, 49.
Sales, **72**, 49.
National Type Approval Program (see Type approval).
National Type Evaluation Program (NTEP), **66**, 101; **68**, 88; **68**, 258; **68**, 8; **68**, 37; **68**, 98; **69**, 5; **69**, 84; **70**, 22; **70**, 49; **71**, 31; **71**, 105; **72**, 92.
Advisory Committee, **72**, 93.
Board of Governors, **71**, 62; **72**, 93.
Certificate of Conformance, **70**, 50; **71**, 108; **72**, 105; **73**, 62.
Full, **72**, 97.
Markings, **73**, 58.
Provisional, **72**, 97; **73**, 59; **73**, 142.
Withdrawal, **72**, 102.
Handbook, **71**, 209; **73**, 55.
Index of Device Evaluations, **70**, 53; **71**, 65.
NTEP Logo, **70**, 50; **71**, 128; **72**, 108.
Participating (testing) laboratories, **71**, 33; **71**, 108; **72**, 96; **73**, 62.
Policy and procedures, **71**, 62; **71**, 105.
Provisional evaluation, **71**, 115.
Relationships of NTEP, HB 44, and W&M Law, **70**, 54.
Request for type evaluation, **71**, 110.
Technical Committee on National Type Evaluation, **69**, 79; **69**, 170; **72**, 93.
Measuring Industry Sector, **72**, 219.
Weighing Industry Sector, **72**, 200; **73**, 55; **73**, 126.
Uniform Regulation for National Type Evaluation, adoption, **71**, 65.
National Voluntary Laboratory Accreditation Program (NVLAP), **61**, 90; **61**, 156; **64**, 48; **64**, 245; **69**, 28.
Natural gas, **71**, 202.
Neale, Charles C., tribute to, **40**, 1.
Net content compliance, Federal role, **71**, 221.
Net quantity, **58**, 75; **58**, 83; **67**, 87.
Net weight, **72**, 21; **73**, 148.
Compliance:
Federal role, **73**, 365.
In-plant inspection, **61**, 227.
Definition, **72**, 122; **73**, 148.
FDA regulations, **57**, 133; **59**, 147; **63**, 202; **64**, 135; **64**, 243; **66**, 198; **67**, 236; **69**, 234.
Labeling proposals and regulations, **59**, 147; **63**, 100; **63**, 203; **64**, 158; **66**, 198; **67**, 236; **68**, 302.
Law enforcement, **59**, 83; **59**, 142; **60**, 79.
Litigation, **59**, 144; **63**, 118.
Mandatory marking of "net", **37**, 12; **37**, 63; **44**, 113.
Meat and poultry products, **62**, 80; **63**, 100; **63**, 138; **64**, 138; **68**, 302.
Philosophy and procedures, **59**, 136.
Policy negotiations, **59**, 131; **60**, 221;
Principles of, **13**, 118; **13**, 187; **39**, 63.
Net weight (continued)
Resolution on sale by, **36**, 113.
Short weight violations, **62**, 246.
USDA Regulations, **65**, 251; **64**, 242.
Newsletters, **21**, 71; **30**, 183; **32**, 98; **49**, 53; **50**, 37.
Nitrogen (liquid), **71**, 202.
Noise measurement standards:
Model Law revision, **60**, 173.
Nominal capacity, **73**, 242.
Nominating Committee, National Conference:
Reports, **57**, 181; **58**, 174; **59**, 246; **60**, 234; **61**, 257; **62**, 256; **63**, 228; **64**, 265; **65**, 273; **66**, 257; **67**, 293; **68**, 321; **70**, 231; **71**, 241; **72**, 298; **73**, 381.
Regional representation, **71**, 53.
Nonautomatic-indicating scales:
Specifications and tolerances, **51**, 158; **51**, 161; **55**, 242.
Nonretroactive requirements, **64**, 219; **68**, 269; **71**, 206.
Northeastern Weights and Measures Association, **64**, 113; **65**, 74; **66**, 35; **67**, 20.
NTEP (see National Type Evaluation Program).
Northwest Weights and Measures Association, **64**, 114; **65**, 73; **67**, 21.
Nuclear weighing, **63**, 40.

Numbers, minimum height, (for metric symbols), **73**, 154.

Nuts, sale and marking, **33**, 55.

O

Octane ratings and blend dispensers, **73**, 169.
Odometers:
- Characteristics of, **47**, 13.
- Control of, **47**, 12.
- Fraud, **58**, 168; **68**, 32.
- NBS investigation, **49**, 47; **49**, 187.
- Specifications and tolerances, **23**, 43; **24**, 140; **51**, 167; **52**, 185; **53**, 123; **55**, 257; **57**, 170; **59**, 40; **59**, 239; **61**, 197; **62**, 191; **64**, 246.

Offenses, **72**, 123.
Office of Weights and Measures (OWM), NIST:
- Enabling Act, **57**, 135; **67**, 239.
- Establishment, **33**, 3.
- FPLA involvement, **59**, 42.
- Mission, **48**, 119.
- Program update, **73**, 119.
- Promotional activities, **57**, 59; **59**, 38; **60**, 169; **61**, 62; **62**, 118; **63**, 191; **64**, 51; **64**, 224; **65**, 202; **66**, 188.
- Services and activities, **35**, 154; **49**, 37; **50**, 31; **51**, 123; **52**, 127; **53**, 26; **54**, 29; **55**, 159; **69**, 231.
  - Engineering studies, **52**, 33; **55**, 120.
  - Information program, **54**, 32.
- Scale test reports, **69**, 200.
- Status report, **71**, 232.
- Training programs, **57**, 64; **59**, 43; **62**, 243; **63**, 194; **64**, 226; **65**, 242; **66**, 29; **66**, 189; **67**, 228; **67**, 240; **70**, 23; **70**, 46.

Ohm (definition), **72**, 252.
Oil. (See Lubricating oil; also, Fuel oil.)
OIML (See International Organization of Legal Metrology).
Oleomargarine, **43**, 49; **56**, 199; **64**, 182; **66**, 96; **67**, 90; **68**, 303; **70**, 82; **71**, 146.
Open dating, **57**, 90; **58**, 145; **60**, 128; **61**, 153; **63**, 45; **68**, 136; **68**, 195; **69**, 128; **70**, 94.
- Uniform Regulation, **58**, 151; **70**, 94; **72**, 139.

Operational controls, **73**, 237.
Operating temperature, **71**, 181.
Ordnance Department, U.S., work of, **12**, 99.
Organization and procedure of National Conference. (See National Conference on Weights and Measures.)
Orifice meters (hydrocarbon gas vapor-measuring devices code), **73**, 260.
Ounces, fractional terms, **37**, 63; **39**, 68.
Out-of-hours testing, **73**, 106.
Oxygen (liquid), **71**, 202.
Oysters, sale and marking, **32**, 30; **32**, 43; **40**, 98; **41**, 136; **70**, 85.
- Fresh, labeled by volume, **73**, 215.
- Net drained weight, **73**, 157; **73**, 367.

P

Package control:
- Consumer protection, **60**, 71.
- Consumer complaint handling, **69**, 239.
- Deceptive and slackfill, **57**, 108.
- Industry perspective, **63**, 24.
- International, **68**, 310.
- Net contents:
  - "I" Mark, **69**, 241; **69**, 277.
- Variations resulting from exposure, **69**, 238.

Special Study Group on Enforcement Uniformity, **65**, 181; **66**, 53;
- Task force on, **66**, 210; **67**, 273; **66**, 308; **67**, 44; **69**, 239; **70**, 213.
- Training needs and resources for, **68**, 309.
- U.S. national system, **66**, 210.

Package Marking Regulation, Model, **37**, 43.
- 1960 revision, **45**, 34; **46**, 161; **46**, 162; **48**, 91; **49**, 194; **49**, 196; **50**, 184; **51**, 147.
- Industry viewpoint, **51**, 26.

Package marking requirements, **19**, 121; **24**, 42; **25**, 119; **45**, 39.
- Accuracy, **41**, 83.
- Administrative ruling on prominence and placement, **49**, 196; **49**, 199; **50**, 184.
- Cents off, **47**, 51.
- Conspicuousness, **43**, 125; **47**, 53; **48**, 89.
- Enforcement, **42**, 109.
- Extraordinary and qualifying terms, **41**, 135; **43**, 128; **46**, 37; **47**, 52; **49**, 192.
- Foods, essential, **32**, 33.
- Legibility, **41**, 77.
- Resolutions, **7**, 107; **12**, 207.

Package weighing machinery, automatic, **38**, 40.
Packages (also see Containers; Cans), **71**, 70.
- Advertising strategy, **44**, 99.
- Deceptive and slack fill, **43**, 37; **45**, 109; **46**, 75; **47**, 101.
  - Resolution, **43**, 108.

Packages (continued):
Federal-state cooperation on regulations:
Resolutions, **53**, 151.
Food:
Labeling, legal requirements and commercial practices, **51**, 22.
Standardization, **29**, 79; **29**, 125; **30**, 145; **32**, 96; **33**, 124; **37**, 14; **41**, 27.
State responsibility, **40**, 110.
Weights, state supervision, 44, 121.
Interstate shipment, **17**, 47; **19**, 160; **29**, 9; **36**, 74.
Retail packages, quantity labeling, **52**, 163.
Net contents, Food and Drug Administration survey, **45**, 101.
Quantity control statistics, 41, 57; **48**, 97; **51**, 114.
Random, sale of, 34, 119.
Sampling and net contents checking, Field manual on, **68**, 308.
Standardization, **28**, 53; **29**, 85; **29**, 89; **29**, 104; **30**, 145; **40**, 160; 47, 51; **48**, 87.
Resolution, **27**, 110; **28**, 138; 43, 107; 47, 47.
Supervision:
Federal, **46**, 132; 47, 79.
State, 43, 103; 47, 66.
Systematized, 34, 103.
Packaging and labeling:
Equity, **56**, 85.
Federal-state programs, **55**, 46.
Forum, **55**, 46.
Imports, **57**, 39; **57**, 134.
Industry support and concern, **55**, 51.
Industry's viewpoint on Model Law and Regulation, **51**, 26.
Item pricing, **61**, 229.
International comparison of, **67**, 47.
Legislation:
Resolution, **51**, 171.
Truth-in Packaging Bill, packager's viewpoint, **48**, 52.
Litigation, **58**, 50; **58**, 78; **61**, 226; **62**, 74; **62**, 138; **62**, 160; **63**, 119.
"Market Place Survey," **69**, 240.
Maximum allowable variation (MAV), **63**, 145; **64**, 20; **69**, 135; **71**, 155; **72**, 140.
Meat, **57**, 110.
Metric declarations, **67**, 147; **63**, 99; **63**, 149.
Merchandise distributors, support and concern of, **55**, 55.
Multi-unit, variety and combination, **62**, 212; **64**, 184; **64**, 238; **65**, 182; **63**, 201; **69**, 106.
Random weight, **58**, 149; **62**, 211.
Policy and procedure, **59**, 131.
Retail, **67**, 87.
Feather and down products, **58**, 148.
Declaration of responsibility, **61**, 247.
Sheets and pillow cases, **62**, 28.
Uniform Regulation, **61**, 217; **71**, 29; **71**, 143.
Packaging and labeling (continued):
1968 revision of Model Regulation for Package Marking Requirements, **53**, 133.
1969 revision, **54**, 214; **55**, 267; **56**, 204; **57**, 142; **58**, 148; **59**, 219; **60**, 178; **61**, 247; **62**, 212; **63**, 149; **64**, 183; **65**, 203; **66**, 94; **67**, 86; **68**, 117.
Survey on state adoption, **69**, 108.
Packaging and Labeling Act, Fair:
Consumer view, **52**, 75.
Effect on prepackaging scales, **52**, 109; **53**, 92.
Implementation, **52**, 54; **52**, 59.
Implications of, **53**, 72.
Industry view, **52**, 69.
Manual, **54**, 163; **55**, 229; **56**, 163.
NBS responsibililties, progress of, **53**, 36.
Need for and characteristics of, **52**, 63.
OWM involvement, **59**, 42.
Preemption, **53**, 38; **62**, 126.
Regulation, **57**, 107; **58**, 50; **60**, 77; **60**, 128; **61**, 110; **62**, 76; **62**, 127; **62**, 163; **63**, 133.
Roles of Federal agencies:
Agriculture, U.S. Department, **54**, 124.
Federal Trade Commission, **54**, 119.
Food and Drug Administration, **54**, 115.
Internal Revenue Service, **54**, 126.
Seminar, **52**, 53.
Packaging and Labeling, Industry Committee on, **65**, 81; **67**, 27.
Packers and Stockyards Administration (see Agriculture, U.S. Department).
Packers and Stockyards Act, regulations, **33**, 57; **38**, 46; **40**, 47; **41**, 124; **49**, 71.
Packing house products, marking requirements, **42**, 100.
Federal, **41**, 92; **43**, 93.
Paints and related products:
Aerosol, **71**, 145.
Asphalt paints, coatings, and plastics, sale and marking, **54**, 213.
Calking compound, glazing compound, and putty:
Checking of, **55**, 136.
Sale and marking, **52**, 162; **53**, 130; **54**, 213; **56**, 200.
Sale and marking, **31**, 120; **32**, 31.
Tint base, **71**, 146.
Tinting base color systems, sale and marking **40**, 96; **41**, 138.
Paper products and plastic cup products (also see Stationery), **61**, 235; **63**, 135; **64**, 178.
Basis weights, **35**, 139.
Regulation, Model, **46**, 159; **48**, 92; **49**, 196; **51**, 149.
Standardization, **53**, 66.
Wrapping, sale of, **30**, 130; **31**, 120; **40**, 99; **46**, 159.
Parallax, **30**, 131.

Parking meters, characteristics of, **28**, 21; **60**, 210; **61**, 198.
Partial Quality Control Program (PQC), **73**, 230.
Participating laboratory (see National Type Evaluation Program).
Pattern approval (see Type approval).
Peat and peat moss:
Packaging study, **55**, 132.
Regulation, Model, **53**, 128; **54**, 212; **56**, 202.
Sale and marking, **37**, 54; **38**, 78; **39**, 63; **41**, 140; **43**, 46; **44**, 111, **60**, 176; **68**, 179; **69**, 113.
Supervision of, **37**, 58.
Peddlers, regulation of, **18**, 21.
Penalties, **72**, 123.
Pendulum, **71**, 185.
Performance characteristics, **73**, 64.
Performance standards, engineering, **51**, 9.
Permalite, sale and marking, **37**, 61.
Permanence test, **71**, 211.
Procedures, **72**, 243.
Person weighers, **11**, 103; **22**, 128; **23**, 126; **24**, 106.
Specifications and tolerances, **23**, 148; **24**, 113; **24**, 179; **25**, 13; **25**, **33**; **25**, 49; **27**, 98; **28**, 123; **32**, 91; **33**, 100; **33**, 101; **46**, 139.
Petrochemicals, their composition, handling, and quantity control, **41**, 31.
Petroleum:
Measurement, standards and tolerances, **62**, 206.
Products:
Artificial heating of, **66**, 257; **69**, 120; **69**, 186.
Definition, **71**, 143; **72**, 127.
Petroleum industry, problems, **25**, 62; **37**, 23.
Petroleum Institute, American:
Function and objectives, **39**, 54; **52**, 111; **55**, 115; **59**, 93; **64**, 111; **66**, 37.
Standards 1101 and 2531, development of, **51**, 103; **59**, 95; **60**, 145; **65**, 79; **67**, 25.
Installations, **33**, 88.
Research program, **29**, 45.
Testing and testing equipment, **19**, 57; **24**, 41; **26**, 110; **28**, 17; **34**, 38; **36**, 25.
Resolution, **26**, 161.
Petroleum meters, large capacity:
Accuracy survey, **52**, 114; **52**, 116; **53**, 90.
Air elimination, **31**, 25.
Resolution, **26**, 161.
Philippine Islands, administration in, **10**, 50; **11**, 29.
Pickle products, sale and marking, **38**, 81; **56**, 200; **57**, 11.
Pilot study on meat and poultry, **73**, 74.
Plastic bottles, statistics on, **51**, 17.
Plastics sale of, **56**, 200.
Platform scales:
Load distribution, **7**, 169.
Platform scales (continued):
Specifications and tolerances, **8**, 214; **9**, 59; **9**, 91; **10**, 156; **10**, 203; **10**, 222; **11**, 150; **11**, App. 1, 20; **17**, 131; **21**, 151; **22**, 71; **24**, 91; **25**, 88; **26**, 121; **26**, 125; **27**, 75; **27**, 90; **28**, 26; **28**, 115; **29**, 72; **29**, **133**; **29**, 140; **30**, 110; **30**, 112; **31**, 105; **31**, 106; **31**, 129.
Testing and test equipment, **7**, 146; **15**, 32; **18**, 54; **18**, 65; **25**, 110.
Point-of-sale systems, **71**, 183; **72**, 184.
Tare, **73**, 240.
Polishes, sale of, **33**, 54.
Pollution:
Air delivery system, **59**, 17.
Polyethylene film, use of and standards for, **56**, 82.
Polyethylene products, **70**, 80; **71**, 161; **72**, 132; **73**, 155.
MAV's for very thin film, **73**, 175.
MAV's for weight vs. thickness, **73**, 175.
Method of sale, **57**, 149; **62**, 229; **65**, 206.
Net weight labeling, **67**, 94.
Sheeting, **72**, 142.
Standards and consumers, **62**, 40.
Testing in the plant **69**, 115.
Thickness, **70**, 80.
Popcorn, sale and marking, **36**, 96.
Portable axle-load weighers (see Axle-load weighers).
Post Office scales (also see Postal scales):
Digital scale use, **58**, 71.
Marking requirements, **70**, 109.
Metric conversion, **59**, 91.
Standardization, **61**, 201.
Specifications and tolerances, **57**, 134; **58**, 64; **62**, 203; **64**, 203.
Supervision, **24**, 97; **54**, 93; **55**, 228; **56**, 161.
Testing, **17**, 34; **18**, 171; **50**, 12.
Resolution, **17**, 138.
Postal scales, **70**, 109; **73**, 253.
Definition, **72**, 202.
Posted prices, **71**, 183.
Potentiometer, **71**, 185.
Potpourri, method of sale, **68**, 209; **68**, 304; **73**, 159.
Potting and top soil,
Method of sale, **66**, 187; **67**, 97.
Poultry and poultry products, **57**, 114; **63**, 101; **63**, 119; **71**, 71; **73**, 50.
Chicken parts, ready-to-eat, **70**, 83.
Federal regulation, **45**, 71; **49**, 77.
Fresh, **73**, 77; **73**, 225; **73**, 228.
Market, regulation of, **36**, 78; **36**, 85.
Method of sale, **9**, 222; **60**, 174; **67**, 91; **70**, 83.
Moisture loss, **70**, 59; **72**, 85.
Net weight, **62**, 80; **63**, 100; **63**, 138; **64**, 138; **68**, 302
Packaged in federally inspected plants, **73**, 171; **73**, 222.

Poultry and poultry products (continued):
Sale and marking, **56**, 199.
Barbecued, **43**, 50.
Canned, **39**, 31.
Cooked, **42**, 101.
Cut up, **32**, 29.
Dressed, **32**, 29.
Frozen, **32**, 30.
Stuffed, **42**, 101; **43**, 50; **70**, 84.
USDA regulation, **57**, 113.
Poultry Products Act; Wholesome, **63**, 119.
Pound, international, resolution, **44**, 114.
Power backup, **73**, 295.
Precious metals (also see Gold), **71**. 181.
Weighing of, **65**, 238; **67**, 96.
Prepackaged commodities:
Checkweighing, **38**, 12.
Control in the Netherlands, **65**, 165.
Federal supervision, **39**, 22.
Metric conversion in Canada, **60**, 158.
Method of sale, **63**, 148.
Symposium on, **43**, 93.
Weight control, **43**, 74.
Prepackaging scales:
Automatic, characteristics of, **41**, 52.
Effect on of Fair Packaging and Labeling Act, **52**, 109; **53**, 92.
Marking requirements, **70**, 109.
Specifications and tolerances, **34**, 160; **36**, 110; **44**, 84; **45**, 95; **46**, 140; **46**, 141; **46**, 147.
Supervision over, **47**, 53.
Tare, **73**, 240.
Prescription scales, **71**, 184.
Maintenance and supervision, **9**, 39; **23**, 74.
Specifications and tolerances, **11**, 154; **11**, App. 1, 37; **22**, 73; **26**, 121; **27**, 95; **52**, 170; **53**, 116.
President, National Conference on Weights and Measures:
Addresses (published in all Conference Reports except the 3d, 25th, and 52d).
President's Award (see Awards).
Pressed logs, sale of, **43**, 51.
Pressure measurement, **62**, 199; **63**, 72.
Pressure sensitive seal, **72**, 183.
Preval cartridge, characteristics of, **52**, 90.
Private shippers (see Shipping companies).
"Processed" (definition), **73**, 157.
Produce:
Labeling, **54**, 81.
Merchandising, developments in, **54**, 151.
Method of sale, **64**, 176; **65**, 209; **67**, 152.
Unitized, sale and marking, **41**, 86.
Product storage identification, **72**, 217.
Product vaporization, **72**, 210.
Proposition 13, **63**, 55; **63**, 84.
Prosecutions and obtaining evidence, **14**, 50; **17**, 85; **19**, 89; **23**, 86; **41**, 17; **45**, 87.
Board of adjustment, **25**, 95.
Prosecutions (continued):
Search and seizure, **54**, 35.
Prototype examination, **52**, 106; **56**, 117.
Prototype Examination Program
Examination Guidelines, **59**, 41; **61**, 171; **61**, 211; **62**, 153; **63**, 138; **63**, 211; **64**, 205.
Provers, meter, **40**, 59; **40**, 68; **42**, 75; **49**, 139.
Design, **71**, 194; **72**, 213.
Liquid, **68**, 58.
NBS liquefied petroleum gas prover, **42**, 75.
Testing, **8**, 91.
Provisional Certificate of Conformance (see NTEP).
Provisional evaluation, **71**, 115.
Public markets, supervision, **16**, 53; **16**, 58.
Public utilities, **73**, 114.
Publications adopted by National Conference on Weights and Measures:
Handbook 26, "Weights and Measures Administration," **46**, 116; **46**, 123.
Handbook 37, "Testing of Weighing Equipment," **33**, 173.
Handbook 45, "Testing or Measuring Equipment," **36**, 113.
Handbook 67, "Checking Prepackaged Commodities," **44**, 115; **57**, 139; **57**, 140; **58**, 83; **58**, 136; **59**, 40; **59**, 132; **60**, 129; **60**, 221; **61**, 224; **62**, 97; **63**, 145; **63**, 202; **64**, 20; **65**, 246; **68**, 140; **73**, 149.
Handbook M-85, "Specifications and Tolerances for Commercial Weighing and Measuring Devices," **22**, 3.
Handbook H-22, "Specifications, Tolerances, and Regulations for Commercial Weighing and Measuring Devices" (revision of M-85), **28**, 103.
Handbook H-29, "Specifications, Tolerances, and Regulations for Commercial Weighing and Measuring Devices" (revision of H-22), **31**, 102.
Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices," (revision of H-29), **34**, 141; **40**, 116; **50**, 204; **56**, 182; **57**, 23; **57**, 60; **58**, 49; **58**, 71; **59**, 51; **59**, 173, **60**, 129; **60**, 225; **61**, 5; **61**, 13; **61**, 15; **61**, 169; **62**, 66; **62**, 152; **64**, 1; **64**, 184; **64**, 215; **65**, 236; **66**, 90; **66**, 89; **66**, 171; **68**, 103.
Relationships with NTEP and W&M Law, **70**, 54.
Handbook 130, "Uniform Laws and Regulations," **66**, 88; **67**, 69; **68**, 117; **69**, 100.
Editorial changes, **71**, 207.
Handbook 133, "Checking the Net Contents of Packaged Goods," **66**, 113; **67**, 275; **68**, 13; **68**, 302; **70**, 22; **70**, 48; **71**, 74; **72**, 140; **72**, 295; **72**, 297; **73**, 50; **73**, 75.
Adoption, **69**, 135; **69**, 232; **70**, 102; **71**, 31.
Post-adoption management, **70**, 48.

Handbook 133 (continued):
FTC policy, **71**, 160.
Proposed revision, **69**, 244.
Survey and summary, **69**, 244; **69**, 299.
Handbook 143, "State Weights and Measures Laboratories--Program Handbook," **70**, 53.
Publications, NCWM:
No. 1, NCWM Constitution and Bylaws, **70**, 32; **70**, 41.
No. 2, Weights and Measures Directory, **71**, 58.
No. 3, NCWM Policy and Guidelines, **71**, 51; **71**, 58.
No. 4, NTEP Policy and Procedures, **71**, 58.
No. 5, NTEP Index of Evaluations, **71**, 58; **71**, 65.
No. 6, NTEP Program Brochure, **71**, 58.
No. 7, Weights and Measures Week Guide, **70**, 46; **71**, 58.
No. 8, Relationship to the NTEP, Weights and Measures Law, H-44, and the New Scales Code, **70**, 54; **71**, 58.
No. 9, Directory--Associate Members, **71**, 58.
No. 10, Meeting and Publication Planning, SOP, and Schedule, **71**, 58.
No. 11, National Training Program, **71**, 58.
No. 14, National Type Evaluation Program, Administration Procedures Technical Policy, Checklists, and Test Procedures, **71**, 209; **73**, 55.
Publicity for weights and measures activities, **11**, 45; **20**, 39; **20**, 67; **28**, 125; **29**, 19; **30**, 100; **31**, 165; **33**, 145; **34**, 56; **40**, 23; **55**, 234. (Also see Week, National Weights and Measures.)
Puerto Rico:
Administration in, **9**, 128; **17**, 17; **42**, 90; **43**, 110.
Sugar and tobacco industries, regulation of, **20**, 35.
Pumps, gasoline (see Gasoline pumps; also see Liquid-measuring devices).
Pulp wood, sale and marking, **42**, 102.

Q

Quilts, **73**, 155.
Quality assurance, **65**, 115.
Quantity declarations, **69**, 107.

R

Radar gun, calibration, **60**, 42.
Radiated interference (also see EMI), **72**, 202.
Radiation measurement, **65**, 147.
Radio Frequency Interference (RFI), **60**, 64; **60**, 82; **60**, 195; **61**, 184, **71**, 176.
Testing procedures, **71**, 175.
Susceptibility test, **71**, 210.
Railroad Advisory Committee, **72**, 199; **73**, 246.
Railroad weighing, **24**, 147.
History of, **57**, 45.
In-motion weighing, tank cars, **73**, 247.
Stenciled tare weights, **55**, 235; **57**, 47; **57**, 147; **58**, 147; **59**, 225; **62**, 11; **64**, 181; **68**, 97; **69**, 235; **71**, 233; **72**, 289; **73**, 370.
Railway track scales, **71**, 186; **71**, 214.
Access to weighing elements, **70**, 110.
Combination, **71**, 182.
Construction, **6**, 67; **11**, 97.
Coupled-in-motion, **73**, 248.
Consecutive-car test train (definition), **73**, 248.
Distributed-car test train (definition), **73**, 248.
Test train (definition), **73**, 248.
Federal Grain Inspection Service, **69**, 233.
In-motion weighing, **57**, 48; **58**, 51; **59**, 233; **61**, 183; **63**, 40.
Railway track scales (continued):
Installation, **11**, 73.
Master track scale and depot:
Establishment, **20**, 33.
Installation, **21**, 40.
NSMA specifications, **23**, 136; **24**, 99.
Plate fulcrum principle, **20**, 15.
Specifications and tolerances, **12**, 107; **17**, 131; **26**, 124; **46**, 142; **47**, 116; **51**, 160; **54**, 174; **54**, 177; **56**, 171; **56**, 174; **57**, 44; **57**, 159; **60**, 198; **61**, 183; **62**, 170; **63**, 171; **64**, 197; **65**, 254.
Standardization, **12**, 107; **29**, 1.
Test car accuracy, **18**, 176.
Testing, **6**, 67; **8**, 123; **10**, 86; **11**, 62; **36**, 38; **37**, 34.
Model state testing program, **56**, 164.
Reports of NBS tests, **10**, 82; **11**, 87; **12**, 64; **52**, 140; **65**, 9; **65**, 254.
Resolution, **35**, 166.
Random packages, **71**, 142.
Random pack, **71**, 144.
Quantity statement, **71**, 228.
Raw meats, **73**, 78.
Ready-to-eat food, **70**, 83.

Record keeping and report forms, **7**, 90; **10**, 171; **34**, 76; **41**, 35; **45**, 134.
Recyling materials, **69**, 175.
Red meat, **70**, 59.
Regional associations, **70**, 43; **71**, 236; **72**, 293.
Regional weights and measures activities, **71**, 218; **72**, 266; **73**, 314.
Regional weights and measures conferences, Director's roundtables, **69**, 214.
Regional measurement assurance programs, **69**, 41.
Regulations (see Uniform regulations):
Legal status of court decisions, **22**, 132.
Survey on state promulgation, **25**, 38.
"Repeatability" requirements, **71**, 179.
Replacement parts, conformance, **73**, 60.
Report forms (see Record keeping).
Reports, annual, **23**, 92.
Resolutions Committee, National Conference:
Reports, **57**, 182; **58**, 175; **59**, 247; **60**, 235; **61**, 258; **62**, 258; **63**, 224; **64**, 261; **65**, 271; **66**, 253; **67**, 291; **68**, 319; **69**, 305; **70**, 232; **71**, 242; **72**, 299; **73**, 379.
Responsibilities of weights and measures officials, **35**, 94; **37**, 45; **42**, 107.
Retail device (definition), **72**, 223; **73**, 379.
Retail motor fuel dispensers (see Motor fuel dispensers).
Retail trade scales, **59**, 89.
Revenue sharing, **56**, 5.
RFI (see Radio frequency interference).
Ribbon, crimping, sale of, **41**, 140.
Role of:
Federal Trade Commission, **54**, 119.
Internal Revenue Service, **54**, 126.
U.S. Department of Agriculture, **54**, 119.
U.S. Food and Drug Administration, **54**, 115.
Roofing and roofing products:
Regulation, Model, **46**, 159; 51, 149; **52**, 160; **56**, 203.
Sale of, **34**, 123.
Shingles, **72**, 139.
Rope, sale and marking, **38**, 80; **40**, 99; **41**, 137; **42**, 102.
Rounding, **71**, 144; **73**, 153.
Rug cleaning charges, **35**, 143; **36**, 97.
Russell 1,000-pound balance, **40**, 31.

S

Safety, **73**, 314; **73**, 336.
Performance standards, **54**, 17.
Salesmanship in weights and measures field, **27**, 69.
Sampling plans and MAV's, **72**, 140.
Category A, **73**, 74.
Category B, **73**, 74.
Sand, sale of, **63**, 151.
Sandwich bags, **72**, 133.
Saudi Arabia, industrial development, **53**, 43.
Sausage, **72**, 89; **73**, 78.
Fresh, **73**, 79; **73**, 225.
Scale industry:
Developments, **39**, 16.
Manufacturer's viewpoint, **55**, 74.
Scale Manufacturers Association:
Activities, **32**, 63: **39**, 70; **52**, 105; **60**, 145; **60**, 170; **62**, 7; **62**, 174; **63**, 174; **64**, 64; **64**, 119; **64**, 219; **65**, 81; **66**, 50; **66**, 124; **67**, 30.
Report on tolerances, **65**, 39.
Publications:
"Terms and Definitions for the Weighing Industry," **66**, 50.
"The Weighlog," **66**, 50.
Scales (dual indications), **71**, 173.
Scales (for specific type of scale, see entry for that type):
Accuracy of, **68**, 226.
Arresting mechanisms, **61**, 179; **64**, 194; **65**, 214; **66**, 210.
Class II (Table 3), accuracy classes, **71**, 175.
Class IIII:
"Not Legal for Trade," **73**, 264.
Design and construction, **8**, 123; **8**, 135.
Trends in the 80's, **65**, 85.
Federal Specification AAA-S-121, **25**, 23.
History and technology, **56**, 4.
Identification, **70**, 106.
Indications, visibility of, **22**, 117; **23**, 134; **25**, 31
Keyboard adjustments, **71**, 182.
Levers, level and plumb conditions, **9**, 34.
Large capacity, testing location, **73**, 59.
Load-receiving elements (design of), **71**, 174.
Parallax, **30**, 131; **66**, 219.
Pre-NTEP approved, **73**, 59.
Reconditioning, **22**, 122.
Scale divisions, **71**, 173.
Specifications and tolerances (general, for all scales), **8**, 213; **9**, 59; **9**, 90; **9**, 99; **9**, 112; **10**, 139; **10**, 148; **10**, 151; **10**, 200; **10**, 220; **11**, 107; **11**, 138; **11**, App. 1, 15; **16**, 129; **17**, 130; **21**, 149; **23**, 122; **24**, 91; **24**, 145; **25**, 103; **26**, 118; **26**, 124; **27**, 75; **27**, 90; **28**, 26; **28**, 115; **29**, 71; **30**, 108; **31**, 105; **32**, 91; **33**, 100; **36**, 109; **37**, 84; **37**, 85; **37**, 87; **38**, 89; **39**, 86; **41**, 150; **41**, 167; **42**, 77; **43**, 63; **44**, 81; **45**, 93; **51**, 158; **52**, 169; **52**, 170; **53**, 114; **54**, 170; **55**, 240; **56**, 171; **57**, 155; **58**, 154; **59**, 230; **60**, 190; **61**, 5; **61**, 175; **62**, 166; **63**, 13; **64**, 220; **65**, 212; **66**, 117; **67**, 161; **68**, 217; **69**, 170.

Scales (continued):
Strain gage measurement, **62**, 158.
Strain-load tests, **35**, 156.
Weighbeams, **31**, 71; **35**, 109; **68**, 219.
Scanner prices, **71**, 183.
Scotland, administration, **47**, 55.
Scientific Apparatus Manufacturers Association (SAMA), **57**, 36; **66**, 47.
Scouring pads, nonwoven synthetic:
Packaging of **66**, 95; **66**, 155; **67**, 89.
Sea shells, method of sale, **61**, 223.
Seafood and seafood products:
Clams, **70**, 85; **71**, 147.
Glazed raw, **73**, 173.
Ice glazed, **63**, 66; **63**, 152; **63**, 201; **64**, 251; **65**, 256.
Method of sale, **56**, 199; **59**, 222; **63**, 70; **67**, 150; **70**, 83.
Mussels, method of sale, **70**, 85; **71**, 147.
Oysters, sale and marking, **32**, 30; **32**, 43; **40**, 98; **41**, 136; **70**, 85.
Fresh, labeled by volume, **73**, 215.
Net drained weight, **73**, 157; **73**, 367.
Shellfish, whole, **73**, 157.
Stuffed, **70**, 84.
Sealing adjustable components, **70**, 107.
Seals, approval, **8**, 204; **39**, 65; **40**, 109.
Resolution on location, **24**, 173.
Searles, R. W.:
Resolution, **56**, 218.
Tribute to, **56**, 30.
Section, **73**, 251.
Capacity, **72**, 189; **73**, 242; **73**, 244.
Tests, **71**, 179; **71**, 180.
Range of errors, **72**, 195.
"Repeatability," **71**, 179.
Security seal, **72**, 183.
Seeds, sale and marking, **33**, 52; **33**, 54; **33**, 159; **38**, 81; **39**, 62; **56**, 208, **63**, 152; **57**, 145; **59**, 220; **60**, 185.
Self-contained scales not installed in a pit, **70**, 110.
Sensibility reciprocal, effects on, of packing pivots and bearings with grease, **30**, 88.
Sensitivity, **71**, 180.
Service charges, **73**, 253.
Service, sale of, **16**, 23; **18**, 77; **33**, 155.
Service station console, **72**, 209.
Servicemen (automobile mechanics):
Itinerant, **24**, 154.
Licensing, **27**, 62; **28**, 38; **33**, 122; **33**, 130; **34**, 19
Resolution, **27**, 110.
Regulation, Model, on Registration, **51**, 151; **52**, 107.
Sewing threads and yarn,
Labeling of, **66**, 153.
Sheets, bed, sale and marking, **45**, 32.
Shellfish, whole, **73**, 157.
Shift tests, **71**, 179; **71**, 180.
Range of errors, **72**, 195.
"Repeatability," **71**, 179.
Shipping companies, **72**, 294; **73**, 373.
Shipping scales, **73**, 253.
Shortwave frequencies, **73**, 264.
Shrink pack, **73**, 226.
Shrinkage loss of commodities, **17**, 63; **18**, 154; **33**, 55; **34**, 137; **43**, 79.
Sale by weight, **34**, 119.
Side (definition), **72**, 219.
Simulated load tests, **72**, 203.
Single-draft weighing, **73**, 252.
Small-capacity scales, **63**, 174.
Smithsonian Institute, weights and measures exhibit, **59**, 212; **60**, 168; **61**, 162.
Soaker pad, **73**, 226.
Soap and soap products:
Bar:
Characteristics of **34**, 82.
Sale and marking, **33**, 54; **34**, 118; **36**, 62; **37**, 57; **42**, 102; **60**, 77.
Weight loss, **55**, 127.
Liquid, sale and marking, **33**, 54.
Packaged:
Quantity control at Procter & Gamble, **46**, 101.
Marking, **34**, 79.
Powders, sale and marking, **33**, 54.
Society of Automotive Engineers,
Fuel Supply Systems Committee, **57**, 129.
Soups sold by volume, **72**, 139.
Sour cream, **72**, 131.
Southern Weights and Measures Association, **64**, 122; **65**, 72; **67**, 22.
Sod and turf, method of sale, **61**, 243.
Space vehicle measurements, **52**, 94.
Span (structural) (definition), **73**, 244.
Spark ignition motor fuel (definition), **71**, 138.
Special recognition (retirees or members' career change), **71**, 52.
Specifications and Tolerances Committee, National Conference:
Enlargement, **10**, 143; **15**, 121.
Interpretations, **40**, 121; **41**, 167; **44**, 88; **44**, 89; **45**, 95; **55**, 272.
Reports, **70**, 103; **71**, 167; **72**, 174; **73**, 233 (published in all Conference Reports starting with the Seventh Report).
Specifications and tolerances, general, for all weighing and measuring devices, **30**, 112; **32**, 73; **32**, 81; **33**, 156; **34**, 146; **35**, 81; **42**, 76; **43**, 63; **44**, 80; **46**, 139; **46**, 140; **47**, 110; **48**, 102; **50**, 197; **51**, 154; **52**, 168; **53**, 111; **55**, 239; **56**, 167; **69**, 170.
Specifications and tolerances for specific weighing or measuring device (see entry for device).

Sphygmomanometers (blood pressure measuring devices):
Accuracy, **63**, 187; **63**, 208; **64**, 245; **65**, 255; **66**, 201.
Split-compartment tests, tolerance values, **73**, 258.
Spreads (see margerine), **70**, 82.
Spring, **71**, 185.
Spring scales and balances:
Specifications and tolerances, **8**, 217; **8**, 219; **9**, 60; **9**, 99; **10**, 140; **10**, 211; **10**, 213; **11**, 109; **11**, 152; **11**, App. 1, 30; **11**, App. 1, 33; **17**, 131; **21**, 152; **24**, 91; **25**, 106; **28**, 104; **31**, 105; **32**, 92; **32**, 94; **33**, 96; **34**, 161; **43**, 64.
Straight-face:
Specifications and tolerances, **8**, 219; **10**, 213; **11**, App. 1, 33; **21**, 152; **26**, 124.
Stage II vapor recovery (see Vapor recovery).
Standardization, industrial, **14**, 79; **16**, 76; **16**, 95; **18**, 74; **20**, 34; **21**, 66; **33**, 102.
Standardization of weights and measures:
Legislation, **27**. 1.
Resolutions, **27**, 109; **28**, 137.
Standards:
Calibration, **33**, 167.
Commodity, **70**, 47.
Code for trade, **67**, 7.
Consumers, **52**, 39.
Engineering performance, **51**, 9.
Importance, **52**, 1.
Industrial, **57**, 34; **66**, 16.
International, **65**, 15.
Length, testing of, **20**, 28.
Mass (also see Weights), **36**, 42.
Office standards, testing, **19**, 103.
Precision standards, manufacture and uniformity of design, **15**, 102.
Standards (continued):
New state, **45**, 45; **45**, 51; **50**, 33; **51**, 125; **52**, 130; **53**, 28.
Policy outline, **66**, 15.
Primary, care and use, **34**, 132.
Pros and cons, **64**, 102.
Safety performance, **54**, 17.
System, U.S., **68**, 19.
Voluntary concensus system, **60**, 129.
Voluntary, development and use, **54**, 95.
Program of U.S. Department of Commerce, **54**, 102.
Standard reference materials, **69**, 25.
Standards Institute, program of, **54**, 95.
State Laboratory Program, **70**, 24.
State metrology laboratories:
NBS support, **68**, 9; **69**, 37.
State standards program, 150th anniversary, **73**, 371.
Stationery, sale and marking, **31**, 120; **33**, 54; **39**, 63; **45**, 32.
Statistical Data, "Statistics Mode Uncomplicated," **64**, 225.
Stove fuel pellets, **73**, 159.
Strain-load tests, **35**, 156.
Definition, **72**, 205.
Stratton, Samuel Wesley, tribute to, **16**, 136.
String, sale and marking, **40**, 99.
Subcommittee on Commodity Standards, **70**, 47.
Sub-meter (definition), **72**, 252.
Sugar industry in Puerto Rico, regulation of, **20**, 35.
Summing boxes, **73**, 58.
Superbalances, **69**, 18.
Surcharge, **73**, 164.
Suspension scales, lever type:
Specifications and tolerances, **10**, 211; **11**, 152; **11**, App. 1, 29.
Symbols, **36**, 96; **73**, 237.
System analysis, **55**, 151; **63**, 59; **63**, 195.
System "upgrade" evaluation, **73**, 59.

T

Tanks:
Fuel-oil storage, gaging, **19**, 22.
Hot-water storage, resolution on marking, **9**, 123.
Vehicle (see Vehicle tanks).
Tare, 70, 109; **73**, 172.
Dry, **71**, 98; **72**, 87; **73**, 172.
Dried used tare, **73**, 172; **73**, 227; **73**, 228; **73**, 74.
Point-of-sale systems, **73**, 240.
Prepackaging scales, **73**, 240.
Tests, **73**, 51.
Unused dry tare, **73**, 74.
Unused tare, **73**, 228.
Used, **73**, 172.
Used dry, **72**, 85.
Tare (continued):
Weight, **62**, 99; **65**, 216.
Wet, **71**, 71; **72**, 87; **73**, 74; **73**, 172.
Taximeters (also see Mileage-measuring devices):
Code, **73**, 299.
Electronic, **73**, 264.
Position and illumination, **71**, 204.
Specifications and tolerances, **18**, 97; **18**, 107; **19**, 38; **22**, 70; **24**, 91; **39**, 77; **52**, 184; **58**, 168; **61**, 197; **62**, 197; **65**, 235.
Testing and inspection, **12**, 85; **17**, 117; **18**, 78; **40**, 45; **54**, 64; **55**, 256.
Transmission drive, **19**, 31; **20**, 81.
NBS investigation, **21**, 21.
Resolution, **21**, 160.

Taximeters (continued):
Visibility of indications, **71**, 203.
Tea, sale and marking, **31**, 119.
Tech Memo, OWM, **49**, 53; **50**, 37; **60**, 167.
Telephone listings of weights and measures offices, **55**, 233; **67**, 231.
Temperature compensation, **59**, 115; **59**, 166; **59**, 181; **63**, 153; **64**, 189; **65**, 132; **65**, 207; **66**, 257; **68**, 13; **71**, 194; **72**, 221.
Automatic temperature compensating (ATC) systems, **72**, 211; **72**, 214; **72**, 224.
Normal tests, **72**, 211; **72**, 224.
Automatic temperature compensator (Hydrocarbon Gas Vapor-Measuring Devices Code), **73**, 261.
Tenant, **73**, 114.
Test carts, **71**, 174.
Test loads, **73**, 246.
Maximum, **73**, 244.
Test pattern, **73**, 244.
Test weights:
Minimum, **73**, 246.
Class F weights, **71**, 177.
Field standard, **65**, 237.
Accuracy, **71**, 177.
Testing:
Out-of-hours, **73**, 106.
Selective, **48**, 120; **55**, 185.
Textiles:
Basis weights, **35**, 140.
Labeling **56**, 75; **62**, 215.
Thermometers:
Clinical testing, **19**, 48; **59**, 115.
Electronic: **72**, 211.
Liquid-in-glass, **72**, 211.
Mercury-in-glass, **72**, 211.
Thermometer well, **72**, 220.
Thread, sale and marking, **33**, 46; **34**, 113.
Throws, **73**, 155.
Time dependence test, **71**, 211.
Timing devices:
Specifications and tolerances, **56**, 183; **58**, 169; **59**, 240; **60**, 209; **61**, 198; **62**, 197; **63**, 186; **64**, 214; **68**, 307.
Study of, **55**, 126.
Tires:
Air-pressure gauges, accuracy of, **55**, 261.
Tissue Association, report of, **32**, 54.
Tissue products:
Facial and cleansing, sale and marking, **31**, 119; **31**, 126; **32**, 31; **33**, 49; **34**, 117; **46**, 159.
Sheet, sale and marking, **31**, 120.
Standardization, **53**, 66.
Toilet, sale and marking, **11**, 113; **30**, 130; **31**, 119; **46**, 159.
Resolution, **11**, 182.
Tobacco:
Federal quantity requirements, **41**, 27.
Tobacco (continued):
Sale and marking, **37**, 51; **38**, 67; **39**, 51, **40**, 78.
Resolution, **47**, 110.
Tobacco industry in Puerto Rico, regulation of, **20**, 35.
Tolerance testing using error weights, **73**, 347.
Tolerance values for normal and special tests (LPG and anhydrous ammonia liquid-measuring devices code), **73**, 259.
Tolerance values, truncation of, **73**, 349.
Tolerances:
Commodity, **34**, 137.
Principles, **18**, 110; **29**, 12.
Subcommittee, **65**, 83.
Tomatoes in retail cartons, sale and marking, **37**, 5; **37**, 61.
Ton (also see Coal):
Resolution on 2,000-pound, **16**, 142.
Total Quality Control (TQC) Program, **73**, 230.
Towels, paper, resolution on marking, **11**, 182.
Trade measuring equipment, **63**, 36.
Trading by Weight Committee:
Reports, **32**, 25; **33**, 165; **34**, 75; **35**, 52; **36**, 7; **37**, 18; **38**, 17; **39**, 53; **40**, 87; **41**, 124; **44**, 68.
Resolution, **31**, 158.
Survey by, **38**, 17.
Training (see National Training Program).
Training modules (see National Training Program).
Trash bags, **72**, 133.
Tread rubber products, method of sale, **61**, 223.
Treasurer, National Conference:
Financial status, **70**, 39.
Reports, **57**, 184; **58**, 178; **59**, 250; **60**, 240; **61**, 264; **62**, 263; **63**, 231; **64**, 270; **65**, 281; **66**, 261; **67**, 296; **68**, 325; **69**, 308; **70**, 235; **71**, 245; **72**, 302; **73**, 45; **73**, 302.
Turbine, **73**, 366.
Turkeys:
Frozen, stuffed, marking of, **40**, 98.
Survey on weights of fresh and frozen turkeys, **46**, 79.
With gravy, **72**, 286.
Labeling, **73**, 366.
Turpentine, sale and marking, **31**, 120; **31**, 124; **40**, 99.
Twine, sale and marking, **26**, 27; **40**, 110.
Two-draft weighing of motor-vehicle loads. **28**, 63.
Type (definition), **71**, 107.
Type approval of commercial devices (also see National Type Evaluation Program):
Canada, **47**, 27.
National, **4**, 8; **8**, 85; **9**, 164; **10**, 159; **11**, 84; **12**, 50; **12**, 134; **15**, 57; **15**, 66; **15**, 73; **18**, 147; **20**, 43; **20**, 58; **20**, 61; **21**, 3; **21**, 75; **21**, 98; **45**, 33; **45**, 139; **46**, 155; **65**, 138.
Resolutions, **4**, 58; **8**, 223; **12**, 205; **13**, 177; **20**, 58; **20**, 120.

Type approval (continued):
National, Task Force on, **62**, 72; **62**, 153; **63**, 139; **63**, 153; **64**, 165; **65**, 185; **66**, 41; **66**, 73; **66**, 120; **67**, 36; **67**, 273.
National Type Approval Program for Weighing and Measuring Devices:
Draft plan, **63**, 1240.
State, **8**, 86; **15**, 60; **20**, 43; **20**, 47; **20**, 49; **20**, 50; **20**, 56; **30**, 184; **31**, 109.
Type approval (continued):
View of manufacturers, **56**, 117.
Type evaluation (also see National Type Evaluation Program), **70**, 78; **72**, 98.
Definition, **71**, 107.
Handbook, **71**, 209.
Process, **72**, 95.

U

Undercover buying, **25**, 139.
Purchases, **73**, 106.
Uniform Motor Fuel Law and Regulation (see Motor fuels).
Uniform Motor Fuel Inspection Law (see Motor fuels).
Uniform Open Dating Regulation (see Open Dating).
Uniform Packaging and Labeling Regulation (see Packaging and labeling).
Uniform Regulation for Motor Fuel (see Motor fuels).
Uniform Regulation for National Type Evaluation (see National Type Evaluation Program).
Uniform Weighmaster Law (see Weighmaster).
Uniform Weights and Measures Law (see Law, Uniform).
Uniformity of requirements, **28**, 5; **34**, 90.
Committee on, **22**, 116; **23**, 141; **24**, 171; **34**, 166; **35**, 40; **36**, 20.
Resolution, **21**, 161.
Unit price, random packages, **71**, 142.
Unit pricing, **56**, 90; **57**, 90; **60**, 87; **60**, 110; **60**, 190; **61**, 122; **61**, 176; **63**, 96.
Regulation, Model, **56**, 209; **57**, 146; **59**, 226; **60**, 187; **62**, 210; **64**, 174; **65**, 204.
Units (Dry Measures Code), **73**, 263.
Units of weight, **70**, 108.
Universal Product Code, **58**, 27; **58**, 32; **60**, 83; **60**, 112; **61**, 13.
Unused dry tare (see Tare).
USDA (see Agriculture, U.S. Department).
Used dry tare (see Tare).
Used tare (see Tare).
Utah University, role of, in advancing science and technology, **55**, 92.
Utility buildings, prefabricated, Method of sale, **60**, 178.

V

v_{min} value, **73**, 137.
Vapor measuring device, **71**, 202.
Vapor meters, **35**, 159.
Code for, **48**, 114
Vapor recovery, stage II, **73**, 270; **73**, 307.
Variable-division value scale, **71**, 186.
Variations resulting from exposure, **70**, 81.
Vegetable oil, method of sale, **68**, 208.
Vehicle lading, tolerance values, **72**, 225.
Vehicle scales:
AREA specification for, **25**, 88; **31**, 129.
Capacity, **73**, 242; **73**, 244.
Combination, **71**, 182.
Four-section, **32**, 48.
Testing, **34**, 47.
Local "master" scales, **31**, 87
Marking requirements, **64**, 220.
Minimum load, **72**, 199; **73**, 253.
Platform overhang, **31**, 93.
Damage to, **71**, 182.
Portable, **62**, 5.
Vehicle scales (continued):
Selection, installation and maintenance, **26**, 38; **30**, 45; **46**, 29.
Sensitivity, **72**, 196.
Specifications and tolerances, **8**, 214; **9**, 59; **9**, 91; **10**, 156; **10**, 203; **10**, 222; **11**, 150; **11**, App. 1, 20; **17**, 131; **21**, 151; **22**, 71; **24**, 91; **25**, 88; **26**, 122; **26**, 125; **27**, 75; **27**, 90; **28**, 26; **28**, 115; **29**, 72; **29**, 133; **29**, 140; **30**, 110; **30**, 112; **31**, 105; **31**, 106; **31**, 129; **32**, 94; **32**, 95; **38**, 90; **46**, 141; **46**, 142; **46**, 143; **46**, 145; **51**, 160; **52**, 171; **53**, 113; **53**, 117; **54**, 174; **60**, 195; **62**, 169; **63**, 171; **64**, 198; **65**, 219.
Testing and testing equipment, **15**, 32; **18**, 54; **18**, 65; **20**, 84; **21**, 40; **21**, 48; **22**, 75; **24**, 130; **25**, 110; **26**, 47; **28**, 19; **28**, 94; **28**, 99; **31**, 67; **32**, 112; **54**, 40.
End testing vs. corner testing, **26**, 64.
NBS testing equipment and reports on testing, **26**, 69; **27**, 45; **27**, 46; **27**, 117; **28**, 81; **28**, 88; **29**, 57; **30**, 35; **31**, 61; **31**, 145.

Vehicle scales (continued):
Position test, **73**, 135; **73**, 254.
Shift test, **72**, 189.
Weighbridges, **32**, 49.
Deflection of members, **31**, 129.
Vehicle-tank meters:
Air elimination, **26**, 106.
Computer jump, **66**, 168.
Specifications and tolerances, **25**, 72; **28**, 112; 33, 99; **33**, 101; **34**, 157; **42**, 83; **44**, 87; **50**, 200; **51**, 162; **52**, 181; **53**, 118; **54**, 185; **55**, 252; **56**, 181; **57**, 163; **58**, 165; **59**, 237; **60**, 204; **64**, 208; **64**, 220; **65**, 231; **66**, 165; **68**, 259.
Temperature compensation, **63**, 153; **63**, 182; **64**, 208; **65**, 229; **68**, 258.
Testing and test equipment, **17**, 94; **19**, 57; **23**, 112; **26**, 110; **37**, 66; **39**, 57.
Permanence tests, **73**, 296.
Tolerances, **71**, 196.
Used as measures, **57**, 168; **58**, 167; **59**; 238; **61**, 194; **65**, 233.
Vehicle tanks:
Compartment indicators, multiple, **38**, 93.
Construction, **33**, 68.
Gasoline deliveries, survey on, **15**, 53.
Piping and valves, **26**, 98; **31**, 33; **33**, 63.
Specifications and tolerances, **16**, 90; **16**, 151; **17**, 101; **17**, 115; **18**, 25; **21**, 149; **22**, 71; **25**, 70; **25**, 76; **26**, 104; **27**, 98; **28**, 106; **29**, 65; **29**, 129; **30**, 107; **32**, 90; **34**, 126; **42**, 85; **43**, 66; **44**, 86; **45**, 98; **46**, 150; **47**, 122; **49**, 185; **51**, 164; **53**, 120; **54**, 189; **56**, 182.
Survey, **33**, 70.
Symposium, **33**, 60.
Testing and testing equipment, **17**, 94; **19**, 57; **23**, 112; **26**, 110; **33**, 60; **34**, 156; **35**, 145; **39**, 81.
Vending machine commodities:
Method of sale, **61**, 244.
Packaging and labeling, **57**, 150; **67**, 152.
Verification scale division, **73**, 127.
"e", **71**, 186.
Minimum, **73**, 127.
Verification (testing) standards, **71**, 177.
Volumeters, research program, **29**, 45.
Volumetric provers, **60**, 148; **699**, 188.
Voluntary concensus system, **60**, 129.
Voluntary Consumer Labeling Program, **61**, 152.
Voluntary program of U.S. Department of Commerce, **54**, 102.
Development and use, **54**, 95.
Voluntary Registration of Service-persons and Service Agencies for Commercial Weighing and Measuring Devices, Model Regulation, **67**, 98; **68**, 187; **69**, 122.

W

Wallpaper, sale and marking, **41**, 122; **42**, 103; **64**, 179; **65**, 208.
WAMIS (see Weights and Measures Information System).
Watchmakers, certification of, **27**, 66.
Water meters:
Code for, **48**, 115.
Specifications and tolerances, **60**, 149; **60**, 212; **64**, 207.
Testing, **10**, 52; **21**, 54.
Watt (definition), **72**, 253.
Watt-hour (definition), **72**, 253.
Watt-hour constant (disk constant) (definition), **72**, 253.
Watt-hour meter, electric, **72**, 248; **73**, 269.
Wax paper, sale and marking, **32**, 31; **42**, 101.
"Week" (see Weights and Measures Week).
Weighbeams, **31**, 71; **68**, 219.
Maintenance, **35**, 109.
Weighing devices:
Identification, **70**, 106.
In-motion, **71**, 178.
Nonautomatic, **61**, 205; **63**, 35; **63**, 157.
Weighing elements:
Definition, **73**, 133; **73**, 254.
Marking requirements, **72**, 186.
Weighing systems, seminar, **51**, 57.
Continuous:
Applications, **51**, 93.
Engineering and design, **51**, 84.
Testing, **51**, 99.
Discrete:
Applications, **51**, 74.
Engineering and design, **51**, 61.
Testing, **51**, 79.
Weighing technology:

Challenge of the 70's from viewpoint of manufacturer, **55**, 74.
Forums, **54**, 39; **55**, 73.
Performance criteria, **61**, 200.
Today, **50**, 98.
Tomorrow, **50**, 113; **65**, 90.
Yesterday, **50**, 78.
Weighmaster, **73**, 177.
Uniform Law, **35**, 22; **36**, 62; **60**, 128; **71**, 142; **72**, 125; **73**, 149.
1965 revision, **50**, 189.
Supervision over, **18**, 12; **27**, 11; **34**, 20.
Weighment (definition), **71**, 185.
Weight:
Committee on Trading by Weight (see Trading by weight).
Sale of dry commodities by weight (see Dry commodities).
Whole units of weight, **70**, 108.
Weight classifier (definition), **72**, 202.
Weight statutes, compulsory operation of, **19**, 59.
Weight units, **72**, 201.
Symbols, **73**, 134.
Weight vs. measure, sale by, **29**, 16; **40**, 94.
Weight Watchers International, activities of, **56**, 104.
Weights (also see Test weights):
Large denomination, **29**, 35.
Maintenance, use, and calibration, **54**, 49.
Specifications and tolerances, **8**, 220; **9**, 62; **9**, 112; **10**, 216; **11**, 155; **11**, App. 1, 41; **17**, 132; **27**, 96; **30**, 110; **32**, 96; **36**, 109; **55**, 245.
Testing, **19**, 103.
Weights and measures, **70**, 77.
Construction of sets, **72**, 27.
Enforcement uniformity questionnaire, **65**, 54; **65**, 181.
Inaccuracies and economic distortion, **58**, 97.
Law (see Law, uniform or model).
Legal cases, **71**, 237.
Model Ordinance, **60**, 128; **63**, 153.
Newsletter, **69**, 215.
Problems survey **59**, 214.
Program evaluation, **62**, 110, **63**, 55; **64**, 226; **65**, 242.
Programs in Federal establishments, **57**, 133; **58**, 137; **60**, 223; **61**, 216; **62**, 248.
Weights and measures (continued):
Publications, **63**, 268; **64**, 303; **65**, 307; **70**, 40; **73**, 66.
Regulatory benefits, **60**, 104.
Sampling, **61**, 77.
Weights and Measures Information System (WAMIS) electronics bulletin board, **71**, 102; **72**, 290.
Weights and Measures Week:
Reports, **43**, 25; **44**, 19; **45**, 19; **46**, 34; **47**, 93; **48**, 28; **49**, 164; **50**, 179; **51**, 134; **52**, 154; **53**, 109; **54**, 167; **55**, 237; **56**, 148; **57**, 137; **58**, 140; **59**, 210; **60**, 168; **61**, 160; **62**, 240; **63**, 190; **64**, 223; **65**, 241; **66**, 187; **67**, 216; **68**, 277; **69**, 209; **70**, 46; **71**, 237; **72**, 293.
Resolutions, **11**, 59; **43**, 107; **44**, 115.
Western Weights and Measures Association, **64**, 123; **65**, 69; **67**, 23.
Wet tare (see tare).
Wheat products, shrinkage of, **34**, 62.
Wheel-load weighers, **73**, 251.
Highway protection, **15**, 26; **24**, 123.
Specifications and tolerances, **35**, 84; **38**, 89; **46**, 140; **51**, 160; **52**, 171; **53**, 113; **55**, 242; **56**, 173; **60**, 198; **61**, 175; **62**, 168; **63**, 173.
Testing, **19**, 151; **35**, 133; **72**, 113.
Whole units of weight, **70**, 108.
Wholesale devices, tolerance values, **72**, 213.
Definitions, **73**, 257.
Wholesale (loading-rack) meters, **71**, 194; **73**, 257.
Permanence tests, **73**, 296.
Wiper blades, method of sale, **64**, 182.
Wiping cloths, sale and marking, **34**, 124; **35**, 123; **37**, 55; **57**, 146.
Wire and cordage measuring devices:
Specifications and tolerances, **54**, 194; **63**, 186; **64**, 220; **66**, 169.
Wisconsin program, **48**, 120; **55**, 185.
Wood (see Lumber).
Wood chips, **73**, 158.
Used for seasoning, **72**, 132.
Wool batting, sale of, **30**, 130.

X - Y - Z

Yard, international, resolution, **44**, 114.
Yarn, sale of, **32**, 32.
Yogurt, **72**, 131.
Zero indication, **70**, 107; **71**, 173, **72**, 183.
Automatic monitoring of zero balance, **72**, 183
Zero load balance, **73**, 246.
Mechanism, **71**, 185.
Zip-lock bags, **73**, 176.

A

Adams, O. C., The Great Atlantic & Pacific Tea Company: Weights and Measures Aspects of Chain-Store Operation, **21**, 79.

Adamy, C. G., National Association of Food Chains:
Remarks, **57**, 93.

Ajax, R. L., U.S. Environmental Protection Agency:
EPA Gasoline Vapor Recovery Program, **61**, 17.

Alexander, Hon. Joshua W., Secretary of Commerce:
Address, **13**, 57.

Alegeo, J. S., Glass Container Association of America: Standardization of Packages, **29**, 117.

Allan, D. W., National Bureau of Standards:
Calibration of Police Radar Instruments, **60**, 42.

Allen, K. C., Hobart Manufacturing Co.: Fundamentals of Scale Design, **27**, 55.
An Automatic Prepackaging Scale, **41**, 52.

Allen, L. J., Seattle, WA:
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, **18**, 63.

Alsberg, C. L., U.S. Dept. of Agriculture:
Enforcement of Net-Weight Amendment to the Food and Drugs Act, **9**, 18; **18**, 148.

Ambler, Dr. Ernest, National Institute of Standards and Technology:
NBS and NCWM--Past, Present, and Future, **61**, 128.
Address, **63**, 83.
1980--A Diamond Anniversary, A Golden Opportunity, **65**, 6.
The Direction for Weights and Measures at the Crossroads, **67**, 13.
On the Road Again, **68**, 7
Future Stock to Avoid Future Shock, **69**, 15.
Payoff at the Grassroots, **70**, 21.
A Banner Year, **71**, 26.
To Promote the General Welfare, **72**, 26.
Meeting the Challenge, **73**, 23.

Ancker-Johnson, Dr. Betsy, U.S. Department of Commerce:
Addresses, **59**, 6; **61**, 152.

Anderson, R. J., State of New York:
State Metrology Laboratories: Perceptions and Reality, **69**, 37.

Andresen, Hon. August H., Congressman, Minnesota:
Weights and Measures Prosecutions, **19**, 89.

Andrews, S. D., Department of Agriculture and Consumer Services:
Guarding Measurement Integrity, **60**, 1.
Introduction, **63**, 103.
Metric Update-USA, **64**, 89.

Andrus, W. E., Jr., National Bureau of Standards:
International Organization of Legal Metrology--The Emerging U.S. Role, **60**, 138.
OIML - Under Congressional Consideration, **57**, 32.

Armstrong, J. L., Ottawa, Canada:
Converting to Metric Standards in Canada, **60**, 156.

Astin, A. V., National Bureau of Standards:
Addresses, **37**, 2; **37**, 71; **38**, 4; **39**, 3; **40**, 4; **41**, 3; **42**, 1; **43**, 6; **44**, 7; **45**, 7; **46**, 5; **47**, 3; **48**, 4; **49**, 1; **50**, 6; **51**, 1; **53**, 7; **54**, 6.

Athane, Bernard; International Bureau of Legal Metrology:
International Diplomacy in Weights and Measures, **59**, 26.

Austin, G. F. Jr., Detroit, MI:
Broken Glass, **29**, 31.
Calibration of Vehicles Tanks in Detroit, **17**, 94.
Flour Weights, **37**, 7.
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, **18**, 55.
Inspection and Regulation of Taximeters, **12**, 85.
Inspection of Weights and Measures in Pharmacies, **23**, 74.
Marked Weight and Shrinkage of Hams and Other Wrapped Meats, **20**, 124.
Prepackaged Foods, **38**, 12.
Transmission Drive for Taximeters, **19**, 31.

B

Bacigalupo, A. W., Memphis, TN:
Safeguarding the Merchant, **18**, 44.

Badger, H. L., National Bureau of Standards:
NBS Railway Track Scale Activities, **41**, 142.

Bailey, K. E., Tulsa, Oklahoma:
Petroleum Industry, **59**, 93.

Baker, C. A., State of New York:
Checkweighing Scales, **39**, 29.
Frozen Foods, **33**, 17.

Baker, H. W., Ohmer Fare Register Co.:
Transmission Drive for Taximeters, **20**, 83.

Bakke, K. E., U.S. Department of Commerce:
Address, **58**, 14.

Ballentine, L. Y., State of North Carolina:
Address, **48**, 60.
Bandy, W. C., National Bureau of Standards:
Federal-State Technical Services, **49**, 56.
Barbe, L. J., Jr., Humble Pipeline Co.:
Development of API Standards 1101 and 2531, **51**, 103.
Barnard, F. G., Battle Creek, MI:
Regulations for the Weighing of Coke, **11**, 159.
Barnard, H. E., American Institute of Baking:
Application of Scientific Methods of Law Enforcement, **17**, 63.
Bread Legislation From the Standpoint of the Baker, **14**, 24.
Divergence of Bread-Labeling Requirements, **16**, 98.
Proposed Tolerances for Loaves of Bread, **18**, 143.
Barnard, L., Jr., Lufkin Rule Co.:
Measurement of Length: Yesterday, Today, and Tomorrow, **50**, 154.
Barnes, Miss Margaretta, Hutzler Bros.:
Department-Store Control of Fabric Measurement, **20**, 8.
Barra, R. J., National Bureau of Standards:
Intergovernmental Communication Mechanisms, **60**, 29.
Barrett, C. A., Department of Justice, State of California:
Overview of Consumer Issues, **60**, 115.
Barrett, H. F., Buffalo Meter Co.:
Testing of Gasoline Meters in the Factory, **21**, 126.
Barron, R. F., State of Minnesota:
Detecting Shortages, Securing Evidence, and Prosecuting Offenders, **14**, 50.
Sale of Service on the Basis of Weight or Measure, **16**, 23.
Bartelt, Leland, Dr., U.S. Department of Agriculture:
Grain Weighing Under the U.S. Grain Standards Act, **62**, 1.
Bartfai, J. J., State of New York:
The Creation and Challenge of a State Metric Board, **62**, 104.
Batcheller, H. M., National Scale Men's Assn.:
Activities of NSMA, **29**, 30.
Batemen, C. F., Wayne Pump Co.:
Remarks on Requirement for Sight Glasses on Retail Liquid Fuel Dispensers, **40**, 80.
Baucom, C. D., State of North Carolina:
A Study of the Promulgation of Rules and Regulations as Applied to the Various States of the Union, **25**, 38.
Air Elimination for Vehicle-Tank Meters, **26**, 106.
Remarks on Graduating the Indicating Elements of Scales in Tenth Pounds, **39**, 60.
Remarks on Proving LP-Gas Liquid Meters, **40**, 75.
Remarks on Requirement for Sight Glasses on Retail Liquid Fuel Dispensers, **40**, 79.
The Function and Operation of Sight Glasses, **30**, 15; **40**, 79.
Vehicle-Scale Testing Equipment, **28**, 99; **31**, 69.
Baumes, H. L., League of Virginia Municipalities:
The Training of Public Officials, **26**, 22.
Bay, Betty, Office of Consumer Affairs:
Remarks, **57**, 72.
Bay, G. W., State of Missouri:
Administrative Actions Under Model Law Provisions--PackageStandardization-Random Packages, **47**, 139.
Beacham, L. M., Food and Drug Administration:
Current Position of FDA Regarding the Labeling of Packing House Products, **43**, 96.
Prominence and Conspicuousness of Quantity Statements on Package Labels, **43**, 125.
Bean, H. S., National Bureau of Standards:
A Tentative Code on the Installation, Proving and Operation of Positive Displacement Meters in Liquid Hydrocarbon Service, **32**, 71.
Instruments for Commercial Measurement of Liquefied Petroleum Gases, **30**, 62.
Research Program on Volumeters of the ASME Special Research Committee on Fluid Meters, **29**, 45.
Bearce, H. W., National Bureau of Standards:
Corrections to Standards, **30**, 114.
Glass Graduates Suitable for Weights and Measures Officials, **9**, 126.
Necessity for Tolerances in Excess as Well as in Deficiency, **18**, 110.
Parking Meters, **28**, 21.
The Annual Assay Commission, **25**, 122.
Beaton, C. V., Shell Eastern Petroleum Products, Inc.:
Merchandising Motor Oil in Sealed Bottles, **24**, 20.
Beck, T. C., State of Oklahoma:
Problems Involved in Setting Up a New Weights and Measures Org., **35**, 103.
Becker, M. H., Los Angeles County, CA:
Maximum Effectiveness with Limited Resources, **53**, 22.
Weights and Measures and the Consumer, **60**, 67.
Behrmann, J. F., National Assn. of Retail Grocers:
Irregular or Diversified Packing of Farm Products, **21**, 53.
Behraman, Hon. J. N., Assistant Secretary for Domestic and International Business:
Address, **48**, 2.
Beizer, B., National Consumers Congress:
What the Consumer Needs to Know About Metric, **61**, 120.

Bell, Raymond, U.S. Department of Agriculture:
Wholesale Sale of Milk and Cream, and the Babcock Test, **19**, 13.
Benjamin, Fred, State of Illinois:
Operation of Compulsory Sales-By-Weight Statutes, **19**, 59.
Berka, Frank, Los Angeles County, CA:
Testing of Gasoline Meters in the Field, **21**, 112.
Bernard, J. A., St. Louis, MO:
Quantity Declaration on Packaged Soap Products, **34**, 79.
Berry, G. L., Monmouth County, NJ:
Seasonal Aspects of County Weights and Measures Administration, **22**, 62.
Berryman, Nalls, State of Florida:
Odometers--Rental Automobiles, Official Control, **47**, 12.
Testing Equipment for LPG Measuring Devices, **35**, 62.
Betz, F. W., U.S. Department of Agriculture:
Development and Use of U.S. Grade Standards for Fresh Fruit and Vegetables, **54**, 82.
Beyhan, S. J. American Feed Manufacturers' Association:
Remarks on Trading in Grains by Weight, **42**, 97.
Bierman, R. J., Ramsey Engineering Co.:
Continuous Weighing Systems--Engineering and Design, **51**, 84.
Bigelow, W. S., Suburban Propane:
Panel Discussion on LPG Liquid Metering, **54**, 58.
Bijloo, A. C., Delft, Netherlands:
The System of Control of Prepackaged Products in The Netherlands, **65**, 165.
Birkeland, K., Justerdirektoralet, Norway:
Societal and Technological Demands Upon Legal Metrology--A Strategy for Meeting Increased National and International Needs, **65**, 14.
Black, E. H., Ventura County, CA:
A Weights and Measures Advisory Committee to a State Department of Agriculture, **49**, 108.
An Affair to Remember, **57**, 1.
Large-capacity Scale-Testing Units, **54**, 47.
Blasgen, Dr. N. W., IBM Corporation:
Computers, Miroelectronics, and People, **65**, 110.
Blatt, Miss Genevieve, State of Pennsylvania:
Addresses, **41**, 5; **44**, 12.
Blickley, J. F., State of Pennsylvania:
Liquefied Petroleum Gas, Units of Measurement, **34**, 22.
Should Word "Net" be Mandatory in Quantity Statements, **37**, 12.
Blomquist, V. H., Food and Drug Administration:
Activities of FDA in the Weights and Measures Field, **49**, 60.
Blood, F. E., U.S. Department of Agriculture:
Current Position of USDA Regarding the Labeling of Poultry and Poultry Products, **45**, 71.
Booth, J. R., Haverhill, MA:
Portable Testing Equipments for Large-Capacity Meters and Vehicle-Tank Compartments, **26**, 113.
Borchers, Capt. A. L., Office of Deputy Assistant Secretary of Defense:
Weights and Measures Inspection in Federal Establishments, **54**, 91.
Boughner, W. W., State of Michigan:
Care and Use of Primary State Standards, **34**, 135.
Bousfield, A., E. & T. Fairbanks & Co.
Design and Construction of Scales, **8**, 123.
Development in Heavy Track-Scale Construction, **11**, 97.
Development of Industry, **21**, 99.
Development of Large-Capacity Scales, **24**, 99.
Heavy-Capacity Platform Scales--Apparatus and Methods for Factory Tests, **18**, 65.
Bowen, J. E., Newton, MA:
Chairman's Address, **52**, 29.
Bowman, A. P., Oscar Mayer & Co.:
Quantity Control on Production Lines, **43**, 97.
Bowman, D. L., U.S. Department of Agriculture:
Scales Under Expanded Packers and Stockyards Jurisdiction, **44**, 125.
Boyd, W. C., State of Indiana:
Communications in Weights and Measures Enforcement, **44**, 41.
Boyer, L. R., Fairbanks, Morse & Co.:
Plate-Fulcrum Principle in Scale Construction, **20**, 11.
Boyle, J. A., Portland, ME:
Supervision Over Domestic Sales of Fuel Oil, **33**, 161.
Bradley, R. O., Toledo Scale Co.:
Belt Conveyor Scales, **37**, 65.
Bradley, R. O., Reliance Electric Co.:
Digital Designs in Weighing Systems, **58**, 36.
Brady, Mrs. Mildred E., Consumers Union:
Twentieth Century Problems in Equity in Quantity, **45**, 109.
Brambaugh, R. T., Scale Mfrs' Association:
Remarks, **57**, 43.
Brand, Hon. Charles, Congressman, Ohio:
Standard Weight Bread Law, **17**, 59; **19**, 83.
Brandly, P. J., U.S. Department of Agriculture:
U.S. Regulations--Weights and Measures--Poultry, **36**, 85.
Branscomb, L. M., National Bureau of Standards:
President's Addresses, **55**, 7; **56**, 18.
Brenneman, O. E., State of Ohio:
Not in the Book, **28**, 5.

Brenton, J. E., State of California:
Testing Equipment for LPG Measuring Devices, **35**, 53.
Wiping Cloths, **37**, 55.
Brickenkamp, C. S., National Bureau of Standards:
Grain Moisture Measurements and the Weights and Measures Community, **60**, 52.
NBS Handbook 67: Where the Paths Have Led, **62**, 97.
Progress Towards Uniform Compliance Testing, **59**, 131.
Bridge, M. A., Columbus, OH:
Use of Auxiliary Automobile Tanks for Checking Gasoline Deliveries, **19**, 101.
Bridgeman, O. C., Society of Automotive Engineers:
Dissolved Air in Gasoline, **22**, 112.
Briggs, C. A., National Bureau of Standards:
Car Weighing, **7**, 162.
Developments in Specifications for Railroad Track Scales, **12**, 107.
Distribution of the Load Among the Various Points of Support of a Scale Platform, **7**, 169.
Notes on Scales, **8**, 135.
Platform Scales, **7**, 146.
Report of Railroad Track Scale Tests Conducted by NBS, **10**, 82.
Briggs, C. A., U.S. Department of Agriculture:
Heavy-Capacity Platform Scales--Apparatus and Methods of Field Tests, **18**, 55.
Problems in Livestock Weighing, **19**, 40.
Briggs, L. J., National Bureau of Standards:
A Proposal for Legislation to Fix the Standards of Weights and Measures in the United States, **27**, 1.
Fay Stanley Holbrook--In Memoriam, **30**, 1.
National Unity in the Administration of Weights and Measures, **30**, 6.
President's Address, **26**, 1; **28**, 1; **31**, 13.
Progress in the Standardization of Large Capacity Scales, **29**, 1.
Remarks, **34**, 112; **35**, 43.
Resignation, **32**, 4.
Review of Conference Accomplishments, **32**, 7.
Brinkley, P. C., National Association of State Departments of Agriculture:
Addresses, **43**, 89; **46**, 11.
Brode, W. R., National Bureau of Standards:
Remarks, **38**, 75.
Brooker, J. R., Bureau of Commercial Fisheries:
Activities of the Bureau of Commercial Fisheries in the Weights and Measures Field, **49**, 93.
Brooks, H. B., National Bureau of Standards:
Testing of Electric Meters, **10**, 52.
Brooks, P. C., Scale and Balance Mfrs. Assn:
Manufacturers; Attitude Toward Approval of Type, **15**, 72.
Brooks, T. M., Southern Illinois University:
Information--The Consumer Dilemma, **56**, 12.
Brown, P. J., National Bureau of Standards:
To Save Your Life, **54**, 17.
Brown, R. V., State of Texas:
Address, **62**, 137.
Bruckart, William, Western Newspaper Union:
Dollar Justice, **30**, 100.
Bryant, G. H., Frozen Food Institute, Inc.
Frozen Foods, **33**, 29.
Brzoticky, F. H., Department of Agriculture, State of Colorado:
Calibration of Police Radar Instruments, **60**, 42.
Buchanan, J. D., Ottawa, Canada:
Metric Update--Canada, **64**, 99.
Bulson, C. H., Jefferson County, NY:
Publicity as a Means of Increasing Cooperation and Efficiency, **17**, 91.
Burditt, G. M., Chadwell, Keck, Kayser, Ruggles, & McLaren:
The Packaging Industry Looks at the Model Law and Regulation, **51**, 26.
Burditt, G. M., Partner, Burditt and Calkins:
Viewpoint on Net Weight Variations, **58**, 75.
Burgess, G. K., National Bureau of Standards:
President's Addresses, **17**, 2; **18**, 1; **19**, 1; **20**, 32; **21**, 1; **22**, 1; **23**, 1; **24**, 1.
Bussey, W. S., National Bureau of Standards:
Care and Use of State Primary Standards, **34**, 132.
Improving the Service of the NBS Office of Weights and Measures to Officials and Manufacturers, **35**, 154.
Executive Secretary's Reports, **37**, 1; **40**, 125; **46**, 124; **47**, 95; **48**, 21.
Report on LPG Meter Testing--Progress and Experimental Test Setup, **42**, 72.
Bussey, W. S., State of Texas:
Frozen Foods, **33**, 35.
Licensing of Scale Mechanics, **28**, 38.
The State Aids in Strengthening the Local Departments in Texas, **26**, 27.
Butler, B. J., State of Kentucky:
Full Measure, **44**, 73.
The Task Ahead, **43**, 69.
Butler, S. J., U.S. Department of Agriculture:
Net Weight Assurance--A Responsibility for Both Government and Industry, **63**, 118.
Net Weights, Part II, **64**, 131.
Byington, Hon. S. J., U.S. Consumer Product Safety Commission:
Address, **61**, 146.
Byrne, Mrs. Jane, Chicago, IL:
The Consumer Movements in Chicago, **55**, 191.
Byrne, Dr. J., Union Oil Company of California:
Petroleum-Engineering, Measurement, Marketing, **60**, 14.

C

Cairns, Thomas, Glasgow, Scotland:
Weights and Measures in Scotland, **47**, 55.
Cairns, R. W., U.S. Dept. of Commerce:
Address, **57**, 3.
Campbell, Carlos, National Canners Assn.:
Standardization of Packages, **29**, 85.
Campbell, Mrs. Persia, Consumer Counsel to New York State Governor:
Chairman's Address, **50**, 24.
Keeping Laws and Regulations Modern, **43**, 115.
Legislation in the Consumer Interest, **43**, 31.
Campbell, V. D., State of Ohio:
The Testing of Wheel-Load Weighers, **35**, 133.
Cardwell, Dr. Burton D., Chief Deputy Director, Michigan Department of Agriculture:
Welcoming Address, **73**, 21.
Carey, D. J., National Association of Commissioners, Secretaries, and Directors of Agriculture:
Address, **42**, 6.
Carey, L. D., U.S. Department of Agriculture:
Byrd Bill to Consolidate Federal Standard Container Legislation, **25**, 107.
Dimensional Method of Testing Containers for Fruits and Vegetables, **28**, 128.
Carlson, R. W., Minnesota Department of Public Service:
Address, **58**, **4**.
Carpenter, G. E., State of Vermont:
Vehicle Tanks, **33**, 70.
Carpenter, R. G., The Great Atlantic & Pacific Tea Co.:
Prepackaged Perishable Commodities--The Marketer's Viewpoint, **35**, 84.
Carter, T. A., State of Washington:
Sale of Peat Moss, **37**, 54.
Cattell, A., Fairbanks Morse, Inc.
Remarks, **57**, 120.
Cavanaugh, W. T., American Society for Testing and Materials:
Voluntary Consensus Standards, **60**, 133.
Assisting the Conference in Meeting New Challenges in Measurement, **64**, 39.
Cawley, F. R., Label Mfrs' National Association:
Label Manufacturing Under FPLA, **53**, 61.
Chadsey, A. R., George Wetson Company, LTD:
Metric Packaging Experiences in Canada, **62**, 46.
Chaloud, J. H., Procter & Gamble Co.:
Quantity Control at Procter & Gamble, **46**, 101.
Chase, P. W., U.S. Steel Corp.:
Continuous Weighing Systems--Testing, **51**, 99.
Cheyney, A. R., U.S. Post Office Department:
Post Office Department Program for Checking and Maintaining Accuracy of Scales in Service, **18**, 171.
Chisholm, L. J., National Bureau of Standards:
Information Program of OWM, **52**, **143**.
Tech Memo, **49**, 53.
Tech Memo, OWM Library, Metric System, **50**, 36.
Christenson, G. A., U.S. Department of Commerce:
Legal Considerations of the Model State Law on Weights and Measures, **51**, **41**.
Christie, S. H., Jr., State of New Jersey:
Chairman's Address, **54**, 24.
Qualifying Terms Used with Quantity Statements, **43**, 128.
Remarks, **57**, 76.
Strain-Load Tests and Build-Up Tests, **35**, 156.
Clark, W. D., Fairbanks, Morse & Co.:
A Report From the National Scale Men's Association, **34**, **42**.
Clarke, W. G., Pure Oil Co.:
Merchandising Motor Oil in Sealed Bottles, **24**, 16.
Cleveland, R. S., National Bureau of Standards:
Basis Weights for Paper and Textiles, **35**, 139.
Clough, J. L., State of Delaware:
Administrative Actions Under Model Law Provisions--Organization, Personnel, **47**, 133.
Cluett, W. F., Chicago, IL:
Enforcing Scales-By-Weight Legislation and Elimination of the Dry Measure, **15**, 17.
Method of Keeping Sealers' Records, **7**, 90.
Method of Test of Taximeters in Chicago, **17**, 117.
Organization and Conduct of City and County Departments of Weights and Measures, **16**, 34.
Proposed Bread Weight Legislation in Illinois, **14**, 30.
Supervision of Weighmasters, **18**, 12.
Coever, R. A., Jr., Precision Valve Corp.:
The Preval Cartridge, **52**, 90.
Coffman, A. J., U.S. Post Office:
A New Program for Testing Postal Scales, **50**, 12.
Cohen, Herbert, State of California:
The Case for State and Local Enforcement, **59**, 142.
Cohen, S. E., Advertising Age:
The Consumer Challenge--What is it All About, **56**, 67.

Colbrook, S. A., NEWMA:
Northeastern Weights and Measures Association, **64**, 113.
Condon, E. U., National Bureau of Standards:
NBS Training Course Program, **33**, 5.
President's Addresses, **32**, 6; **33**, 1; **34**, 1; **35**, 1; **36**, 1.
Connor, Hon. John T., Secretary of Commerce:
Address, **50**, 1.
Considine, D. M., Brown Instrument Co.:
Some Aspects of Industrial Weighing, **33**, 107.
Corwin, A. W., Allegany County, NY:
A Periodical on Weights and Measures by the Sealers' Association, **21**, 71.
Log Rules, **23**, 128.
Marked Weight and Shrinkage of Hams and Other Wrapped Meats, **20**, 127.
Cosby, C. R., Label Manufacturers National Association:
Standardization of Packages, **29**, 121.
Cottom, C. O., State of Michigan:
Administrative Problems--Relations Between the Official and the Manufacturers and Dealers in Weighing and Measuring Devices, **42**, 107.
Coyne, R. W., Distilled Spirits Institute:
Package Standardization--A Moral Obligation, **46**, 15.
Craig, J. H., State of Pennsylvania:
Mandatory Net-Content Marking of All Commodities in Package Form, **19**, 121.
Crawford, H. E., Jacksonville, Fla.:
Chairman's Address, **45**, 4.
Parallax, **30**, 131.
The Problems of a Local Sealer in a State Having a State Department of Weights and Measures, **26**, 18.
Crawford, W. A., E. I. duPont de Nemours & Co.:
The Instrument Society of America, its Organization, Program, and Relation to Weights and Measures, **50**, 69.
Crews, Major P. W., Virginia Dept. of Police:
Philosophy of Law Enforcement, **45**, 87.
Crittenden, E. C., National Bureau of Standards:
Address, **25**, 1.
Address--International Organization on Metrology, **37**, 19.
Federal Aid in Weights and Measures Programs, **34**, 108.
Report on Proposed International Conference on Legal Metrology, **38**, 72.
Crocker, D. A., Tissue Association, Inc.:
A Report From the Tissue Association, **32**, 54.
Cronin, P. D., U.S. Department of Agriculture:
Federal Laws in Relation to Short Weight in Interstate Commerce, **19**, 160; **19**, 166.
Crosset, R. B., Crosset Produce Co.:
Coming Trends in Produce Merchandising, **54**, 151.
Cruikshank, J. F., Fairbanks, Morse & Co.:
Automatic-Indicating Scales--Printed Weight Indications and Remote Weight Indications, **30**, 19.
Cruse, W. T., Society of the Plastics Industry:
The Plastic Bottle Fulfilling Packaging Needs, **51**, 17.
Cummings, J. J., State of Massachusetts:
Methods Adopted for Regulation of New Types of Devices, **20**, 49.
Testing of Clinical Thermometers, **19**, 52.
Testing Leather-Measuring Machines, **15**, 44.
Curry, T. C., U.S. Dept. of Agriculture:
Regulatory Responsibilities of the USDA Fruit and Vegetable Branch, **33**, 133.
Cushen, W. E., National Bureau of Standards:
The Management of Change, **55**, 151.
Czaia, W. E., State of Minnesota:
Large-Capacity Scale-Testing Units, **54**, 43.

D

Dalziel, W. A., State of Oregon:
Progress of Weights and Measures in the Far West, **18**, 69.
Regulating the Scale of Eggs in Oregon, **19**, 118.
Damon, R. H., Fairbanks Morse:
Discrete Weighing Systems, **51**, 60.
Dana, Margaret, Consumer Relations Counsel:
A New Road for Consumers, **61**, 103.
Remarks, **57**, 81.
Remarks re Consumer Problems, **53**, 48.
Weights and Measures--What's That, **54**, 143.
Daniels, J. M., State of Michigan:
Testing Equipments for Large-Capacity Scales, Methods and Results, **26**, 59.
Dartt, C. E., Columbia Scale Co.:
Use and Abuse of Person-Weighing Scales, **23**, 126.
D'Auria, Alfred, State of New Jersey:
State Authority in Package Control, **43**, 103.
Davis, H. N., State of Vermont:
Flood Conditions as Affecting Weights and Measures Officials in New England, **21**, 153.
Testing Vehicle-Tank Compartments by Liquid Meters, **23**, 112.

Davis, H. N. (continued):
Vehicle-Scale Testing Equipment, **31**, 69.
Dawson, J. J., State of Massachusetts:
Promotion of Interest in Weights and Measures Supervision by Essay Contests Among School Children, **21**, 62.
Testing of Clinical Thermometers, **19**, 52.
Day, F. D., Penn Central Railroad:
Rewards, **57**, 42.
Degrange, L. H., State of Maryland:
Large-Capacity Scale-Testing Units, **54**, 45.
DeHoll, J. C., U.S. Department of Agriculture:
Remarks: **57**, 112.
Delfino, Ezio, Department of Food and Agriculture, State of California; Chairman, 70th National Conference on Weights and Measures:
Communication - Key to Progress, **70**, 26.
Determan, D. W., Council of Better Business Bureaus:
Remarks, **57**, 52.
Dewy, P. H., State of Pennsylvania:
Remarks, **24**, 61.
Diaz, A. E., Commonwealth of Puerto Rico:
Selecting and Training New Inspectors, **43**, 110.
Weights and Measures in Central America, **46**, 128.
Weights and Measures Progress in Puerto Rico, **42**, 90.
Diserio, M. J. New York City, NY:
Testing Equipment for Large-Capacity Scales, Methods and Results, **26**, 50.
Dobell, B. E., Safeway Stores, Inc.:
Prepackaged Produce, **41**, 86.
Downer, J. H., Secretary, National Scale Men's Association:
A Report From NSMA, **36**, 5.
Downing, F. P., State of Wisconsin:
Creamery, Prescription, and Jewelers' Weighing and Measuring Appliances, **9**, 39.
Downing, F. P., U.S. Department of Agriculture:
Movement Toward Obtaining Standing Shipping Containers for Marketing Fresh Fruits and Vegetables, **12**, 89.
Dickinson, H. C., National Bureau of Standards:
Gasoline Losses in Storage and Handling, **25**, 55.
Dickinson, Hon. John, Assistant Secretary of Commerce:
Address, **25**, 61.
Dietz, J. M., Union County, NJ:
Testing Procedures for Vehicle-Tank Compartments, **34**, 126.
DiPiero, Alfred, Camden, NJ:
Our Work in the Field, **37**, 45.
Drake, F. R., National Wholesale Grocers Association:
Metric System, **9**, 27.
Draper, Hon. Ernest G., Acting Secretary of Commerce:
Address, **26**, 73.
Duchesne, J. W., U.S. Post Office Dept:
Weights and Measures Inspection in the Post Office Department, **54**, 93.
Durgin, W. A., National Bureau of Standards:
Standardization and Simplification, **16**, 94.

E

Eagle, J. W., Arthur D. Little, Inc.:
The 1980's Food Marketplace Demographics, Lifestyles and Technology, **65**, 156.
Eberhard, J. P., National Bureau of Standards:
Performance Standards--A Joint Venture of Industry and Government, **51**, 9.
Edgerly, D. E., National Bureau of Standards:
Management Information Systems, **55**, 180.
Planning for the 1980 International Conference on Legal Metrology, **64**, 1.
Product Labeling, **54**, 81.
Repeal of the Standard Container Acts of 1916 and 1928, **54**, 88.
The Information Crisis, **56**, 52.
Egnew, R. C., Department of Agriculture, State of Kentucky:
Laboratory Metrology--Its Goals and Needs, **63**, 17.
Egy, W. L., W. & L. E. Gurley:
Difficulties Encountered by Manufacturers of Precision Standards Due to Nonuniform Requirements, **15**, 102.
Elengo, J. J., Revere Corporation of America:
Impact of Electronics in Weighing, **60**, 59.
The Scale Manufacturers Association Report on Scale Tolerances, **65**, 39.
Ellingwood, Lloyd, Toledo Scale Co.:
"Selection, Installation, and Maintenance of Vehicle Scales" - A Sound-Slide Treatment of Form NBS 256, **30**, 45.
Emery, J. Q., State of Wisconsin:
Maintenance of Accuracy of Scales in Creameries, **17**, 11.
Emhardt, E. C., Philadelphia County, PA:
A Board of Adjustment, **25**, 95.
Engelhard, C. H., Middlesex County, NJ:
Vehicle-Tank Piping Design, **31**, 33.
Epright, A. W., Pennsylvania Railroad:
Plate-Fulcrum Master Scale Installation at Altoona Works of Pennsylvania Railroad, **20**, 15.
Railroad Supervision of Baggage and Freight Scales, **18**, 46.
Railroad Track Scales, **6**, 67.

Ernst, M. L., Jewelers' Board of Trade, New York, NY:
Fraudulent Marking of Jewelry, **17**, 140.
Essig, A., National Meter Co.:
Testing of Gasoline Meters in the Factory, **21**, 119.
Estes, H.R., Flint, MI:
Bottles for the Sale of Lubricating Oil, **19**, 17.
Heavy-Capacity Platform Scales-Apparatus and Methods for Field Tests, **18**, 63.
Estes, H.R. (continued):
Temperature as a Factor in the Measurement of Gasoline, **16**, 50.
Evans, A. C., Veeder-Root Company:
Metric Conversion for Gasoline Dispensing Systems, **59**, 97.
Evers, C. F., National Association of Frozen Food Packers:
Frozen Foods, **33**, 25.

F

Fairchild, I. J., National Bureau of Standards:
Commercial Standards, **21**, 66.
Fakler, Herman, Millers' National Federations:
Flour Weights, **38**, 32.
Farrar, A. J., National Bureau of Standards:
The Fair Packaging and Labeling Act, **52**, 63.
The Perfect Formula and PMTO, **60**, 123.
The Supreme Court Decision: Where Do We Go From Here?, **62**, 74.
Faught, W. A., U.S. Department of Agriculture:
Hundredweight or Bushel as a Trading Unit for Grain, **42**, 94.
Feddersen, H. C., U. S. Dept. of Agriculture:
Activities of the USDA Milk Marketing Orders Division in the Weights and Measures Field, **49**, 80.
Ferner, R.Y., National Bureau of Standards:
Testing of Capacity Measures, **8**, 181.
Ferris, C. H., National Bottle Mfrs. Assn.:
Divergence of Requirements Affecting Milk Bottles, **15**, 30.
Fetherston, F. R., Liquefied Petroleum Gas Association, Inc.:
Measurement Problems of the Liquefied Petroleum Gas Distribution Industry, **30**, 65.
Findlay, R. A., State of Alaska:
Remarks, **42**, 116.
Weights and Measures in Alaska--the 49th State, **44**, 69.
Fischer, L. A., National Bureau of Standards:
Executive Secretary's Reports, **5**, 12; **6**, 13; **7**, 16; **8**, 15; **10**, 46; **11**, 83; **12**, 25;**13**, 18.
Foreign Weights and Measures Laws and Regulations, **2**, 35.
History of United States Weights and Measures, **1**, 6.
Mine Scale Work of the Bureau of Standards, **14**, 57.
Fishman, E. H., J. B. Dee Co.:
The Aim of the National Scale Men's Association, **55**, 77.
Fitzgerald, E. B., Colt Industries:
Opportunities, Effects, and Benefits of OIML: An Industry Viewpoint, **62**, 24.
Fitzgerald, F. F., Can Manufacturers Inst.:
Standardization of Packages, **29**, 112.
Flaherty, Thomas, San Francisco County, CA:
Use of Auxiliary Automobile Tanks for Checking Gasoline Deliveries, **19**, 99.
Fletcher, J. C., University of Utah:
The Role of the University of Utah in Advancing Science and Technology, **55**, 92.
Flurry, H. L., State of Alabama:
Methods Adopted for Regulation of New Types of Devices, **20**, 50.
Solving Weights and Measures Problems in the South, **19**, 73.
Foley, J. H., State of New Jersey:
Elimination of Sales by Gross Weight, **16**, 69.
Methods Adopted for Regulation of New Types of Devices, **20**, 47.
New Jersey Sale-By-Weight Law, **17**, 37.
Foster, William, Springfield, MA:
Organization and Conduct of City and County Department of Weights and Measures, **16**, 36.
Testing of Gasoline Meters in the Field, **21**, 104.
Francis, J. H., State of Utah:
Welcome to Utah, **55**, 1.
Fried, Irwin, U.S. Dept of Agriculture:
USDA Net Weight Philosophy and Procedures, **59**, 136.
Frisbie, W. S., U.S. Department of Agriculture:
General Regulations of the Federal Food, Drug and Cosmetic Act, Relative to Net Weight, **30**, 135.
Net-Content Marking of Packages Under Federal Food and Drugs Act, **24**, 158.
The Weights and Measures Provision of the Copeland Bill to Revise the Federal Food and Drugs Act, **25**, 119.
Weights and Measures Requirements of the Federal Food, Drug, and Cosmetic Act, **29**, 5.
Friz, Nelson, Esso Standard Oil Co.:
Test Procedures for Liquid-Measuring Devices--Retail, **36**, 27.

Fullen, R. L., Dallas, TX:
Salesmanship in the Weights and Measures Field, **27**, 69.
Fuller, C. M., Los Angeles County, CA:
Chairman's Address, **44**, 5.
Devices for Dispensing Greases and Similar Products, **20**, 70.
Enforcement of Bread Legislation, Including Proper Tolerances, **14**, 37.
Equipment for Testing Large-Capacity Meters for Petroleum Products, **24**, 41.
Financing a Weights and Measures Organization, **33**, 145.
LPG--Problems Encountered in Testing Metered Systems, **34**, 28.
Measurement of Petroleum Products, **19**, 57.
Organization and Conduct of City and County Departments of Weights and Measures, **16**, 39.
Fuller, C. M. (continued):
Selling Weights and Measures to Top Government Officials, **43**, 112.
Testing Liquefied Petroleum Gas Meter Systems by the Gravimetric Method, **31**, 21.
Vehicle-Scale Testing Equipment, **28**, 96.
Weights and Measures Regulation of Liquefied Petroleum Gases, **30**, 71.
Fuller, H. J., National Scale Men's Association:
Report from NSMA, **43**, 60.
Fuller, W. S., H. J. Fuller & Sons:
The NSMA--Dedication to Proposals and Precision, **50**, 151.
Fullmer, I. H., National Bureau of Standards:
Gages and Gaging, **24**, 125.
Furness, Betty, Special Assistant to the President for Consumer Affairs:
Address, **52**, 39.

G

Gast, F. W., U.S. Treasury Department:
Weighing in the Customs Service, **18**, 104.
Gatewood, Lt. Col. C. B., U.S. Army:
Work of the Ordnance Department, **12**, 39.
Gatewood, E. H., National Hardwood Lumber Association:
Report and Recommendation to the National Conference on Weights and Measures on the Measurement of Kiln Dried Hardwood Lumber, **61**, 49.
Gehringer, C. G., Hobart Manufacturing Co.:
The Science of Weighing--Today, **50**, 98.
Weights and Measures Advisory Committee to NBS, **49**, 104.
Gerdom, W. F., Tokheim Corporation:
Charging Systems and Designs, **58**, 55.
Gerdom, W. F., Gasoline Pump Manufacturers Association:
Digital Designs-Measuring, **57**, 124.
Gerk, Fred A., Division Director, Standards and Consumer Services, NMDA:
Introduction of Dr. W. P. Stephens, **71**, 23.
Getzoff, B. M., Echt & Getzoff:
Ladder Measurement and Labeling, **52**, 81.
Giggard, E. D., Continental Can Co.:
What's New in Aerosol Packaging, **52**, 87.
Gilles, Hon. Kenneth, Asst. Secretary, USDA, Marketing and Inspection Services:
Net Weight - A Continuing Dilemma, **72**, 21.
Godsman, M. S., Bennett Pump:
The View of Gasoline Pump Manufacturers Toward Modern Measuring Technology, **53**, 105.
Gomilla, J., U.S. Food and Drug Administration:
FDA & FTC & USDA Regulatory News and Views, **57**, 107.
Role of Food and Drug Administration-A Recap of the First Year Under FPLA, **54**, 115.
Goodpaster, V., NSMA:
National Scale Men's Association, **64**, 116.
Goonetilleke, H., Ceylon:
Weights and Measures in Ceylon, **53**, 44.
Gordon, B. B., Pennsylvania Railroad:
Inspection and Testing of Track Scales, **11**, 62.
Gordon, E. D., National Bureau of Standards:
Progress of Track-Scale Investigation, **12**, 64.
Gordon, L. J., Denison University:
National Survey of State Weights and Measures Legislation, Administration, and Enforcement, **42**, 60.
Second National Survey, **49**, 166.
Third National Survey, **55**, 161.
Uniform Reporting and Records, **45**, 134.
What are the Fundamentals of a Good Weights and Measures Program, **47**, 85.
Gould, R. E., Horological Institute of America:
Certification of Watchmakers by the Horological Institute of America, **27**, 66.
Graham, A., Department of Agriculture, State of North Carolina:
National Association of State Departments of Agriculture, **64**, 124.
Graham, G. F., Streeter Amet Co.:
Electronic Scales, **38**, 52.
Gray, W., Leicester, England:
Consumer Protection in Great Britain, **48**, 32.

Green, J. G., Fairbanks Morse Research Center:
Discrete Weighing Systems--Engineering and Design, **51**, 61.
Greene, E. L., National Better Business Bureau:
The Business Man and the Weights and Measures Official, **21**, 93.
Greene, F. M., State of Connecticut:
Duties of an Inspector in a Retail Food Store, **35**, 36.
Farm Milk Tank Testing, **39**, 46.
Gregory, T. L. E., Nottingham County, England:
The New British Weights and Measures Laws, **49**, 18.
Griffith, C. P., Bowser, Inc.
Air Elimination for Large-Capacity Meters, **31**, 25.
Electromagnetic Flowmeter, **39**, 42.
Meter Type Gasoline Pumps, **33**, 79.
Testing of Gasoline Meters in the Factory, **21**, 117.
Griffith, S. T., Baltimore, MD:
Calibrating Vehicle Tanks by Large-Capacity Measures, **23**, 115.
How the Public is Educated in Baltimore, **20**, 84.
Paper Measure-Containers, **28**, 44.
Personal Element in Our Work, **18**, 170.
The Control of "Bootleg" Coal, **25**, 129.
Guensler, Darrell, Chief, Division of Measurement Standards, California; Chairman, 73rd National Conference:
Experience in Program Evaluation, **63**, 55.
NCWM Chairman's Address, **73**, 28.
Vapor Recovery--A Challenge for Weights and Measures, **62**, 13.
Gutterman, B. M., Food and Drug Administration:
Drained Weight Regulations, **61**, 110.

H

Hadlick, P. E., American Petroleum Inst.:
Cooperation with Weights and Measures Officials, **23**, 29.
Hagenbuck, W. H., The Cordage Institute:
An Introduction to Weights and Measures for Cordage Products, **61**, 44.
Hale, J. W., Phillips Petroleum Co.:
The Petroleum Industry and its Weights and Measures Subcommittee, **52**, 114.
Hall, Thomas, National Association of Ice Cream Manufacturers:
Methods of Sale for Ice Cream, **19**, 148.
Halpine, J. C., Halmore Industries:
Mechanical Displacement Meter Prover Systems, **49**, 139.
Halsey, F. A., American Institute of Weights and Measures:
Metric System, **12**, 112.
Hammer, K. F., Colt Industries:
A Legal Metrology Control System Applicable to the United States, **64**, 58.
Hammon, F. L., State of Idaho:
New Vehicle-Scale Testing Equipment of Idaho, **28**, 19.
Hensen, Erling, State of Minnesota:
A Program of Livestock Scale Testing, **35**, 111.
Hardwick, Hon. Thomas W., Committee on Coinage, Weights, and Measures, House of Representatives:
Address, **7**, 54.
Harks, W. M., Bowser, Inc.:
LPG Dispensing Equipment--Retail, **36**, 22.
Harris, H. E., Exxon Company:
Temperature Correction of Petroleum Products at Retail, **59**, 181.
Harris, T. C., Jr. State of Virginia:
Why Weights and Measures Training Schools, Administrative Actions Under Model Law Provisions--Testing, Devices, and Commodities, **47**, 138.
Harrison, M. J. J., American Railway Engr Assn.:
Motor-Truck Scales and NSMA Activities, **25**, 88.
Harrison, M. J. J., National Bureau of Standards:
Mine Scales and Mine-Scale Investigation, **12**, 161.
Harrison, M. J. J., National Scale Men's Assn.:
End Testing Versus Corner Testing for Motor Truck Scales, **26**, 64.
Standardization Activities of NSMA, **23**, 136.
Harrison, M. J. J., Pennsylvania Railroad:
Factors involved in Large-Capacity Weighing, **24**, 147.
Fay Stanley Holbrook--In Memoriam, **30**, 5.
Tolerances, **29**, 12.
Weighbeams, **31**, 71.
Weighbeam Maintenance, **35**, 109.
Hart, J. L., Gloucester Fisheries Association:
Frozen Fish, **33**, 37.
Hart, Hon. Philip A., U.S. Senator, Michigan:
Address, **46**, 75; **47**, 47.
Hartigan, Joseph, New York City, NY:
Serialization of Type, **9**, 164.
Hartman, C. H., The Durman Company:
Simulated Road Test for Taximeters, **40**, 45.

Harvey, J. L., U.S. Food and Drug Administration:
Shrinkage on Packaged Wheat Products, **34**, 62.
Working Together for the Consumer's Protection, **44**, 105.
Harvey, J. W. D., State of Georgia:
Quantity of Lubricating Oil in Sealed Cans, **41**, 71.
Haskell, W. C., District of Columbia:
Difference in the Amount of a Bushel of a Commodity When Sold By Measure, **8**, 109.
Hasko, S., National Bureau of Standards:
A Progress Report on Aerosol Packaged Products, **49**, 116.
Aerosol Study, **50**, 35.
Confidence in Package Checking Results, **64**, 20.
Cost-Benefit Analysis, **52**, 132.
Forum on Measuring, **54**, 53.
Forum on Measuring Technology, **55**, 99.
Measurement and Engineering Studies of OWM, **53**, 33.
The Development of a Technical Investigation, **49**, 51.
Hassler, F. R., State of Oklahoma:
Ferdinand Rudolph Hassler, 1770-1843, **33**, 137.
Hatos, S. L., National Bureau of Standards:
The Commercial Weights and Measures Survey, U.S. Metric Study, **55**, 201.
Hawkins, C. E., Springfield, MA:
Development of Single-Service Measure-Containers, **31**, 41.
Hawkinson, C. F., National Scale Men's Assn.:
NSMA Bulletin No. 1 on Repair of Heavy Capacity Scales, **22**, 33.
Hayman, H. V., Norfolk, Va.:
Local "Master" Vehicle Scales, **31**, 90.
Heaslip, W. B., Detroit, MI:
Duties of an Inspector in a Service Station, **35**, 30.
Hedlund, F. F., U.S. Dept of Agriculture:
Activities of the USDA Fruit and Vegetable Division in the Weights and Measures Field, **49**, 84.
Hedwall, F. H., Boston and Main Railroad:
Installation and Maintenance of Track Scales, **11**, 73.
Heffron, E. C., Department of Agriculture, State of Michigan:
Crossroads for Weights and Measures, 67,1.
Heim, J. R., Federal Trade Commission:
The Federal Trade Commission and Consumers, **45**, 116.
Heller, David, National Association of Scale Manufacturers:
Remarks on Educational Publicity Program of the NASM, **39**, 70.
Hem, H. O., Toledo Scale Co.:
Activities of the National Scale Men's Association, **28**, 9.
Automatic Scales, **12**, 73.
Hem, H. O. (continued):
Regulation of New Types of Devices, **20**, 58.
Hem, H. W., Toledo Scale Co.:
A New Scale-Testing Device, **21**, 40.
Automatic-Indicating Scales--Printed Weight Indications and Remote Weight Indications, **30**, 26.
Henrichson, W. T., State of Texas:
Supervision of Gas, Electric, and Water Meters in Texas, **21**, 54.
Henry, H. H., State of Vermont:
Functions of a State Sealer, **8**, 177.
Hensen, H. L., Swift & Co.:
Food Package Labeling--Legal Requirements and Commercial Practices, **51**, 22.
Hessee, E. W., State of North Carolina:
Testing Equipment for LPG Measuring Devices, **35**, 65.
Higbee, L. C., W. & L. Gurley:
Difficulties Encountered by Manufacturers of Precision Standards Due to Nonuniform Requirements, **15**, 102.
Hinds, Sherwood, St. Louis Pump & Equipment Co.:
Regulation of New Types of Devices, **20**, 64.
Hindsman, S. F., State of Arkansas:
Transferring Technology for Trade: A Team Effort, **69**, 11.
Hine, D. J., API:
Remarks, **57**, 130.
Hodges, Hon. Luther H., Secretary of Commerce:
Address, **46**, 1.
Hodgkins, E. W., American Railway Engineering Association:
Dynamic Weighing in the Railroad Industry, **58**, 49.
Hodsman, Dr. G. F., Birmingham, England:
Weights and Measures Regulations--The European Scene in the Eighties, **65**, 95.
Hoffman, E. L., Socony-Vacuum Oil Co.:
Measurement of Petroleum, **37**, 23.
Holbrook, F. S., National Bureau of Standards:
Decision of the U.S. Supreme Court on Nebraska Bread Law, **17**, 51.
Drainage Characteristics of Lubricating-Oil Bottles, **24**, 22.
Executive Secretary's Report--Resume of State Legislation, **22**, 36.
History of Legislation in Re Approval of Type, **15**, 66.
Method of Test in Conformance with Specification No. 8 for Liquid-Measuring Devices, **15**, 115.
Newly Installed Motor-Truck Scales, **28**, 88.
Practicability of Proposed Sale of Commodities on Basis of Moisture-Free Ingredients, **18**, 154.
Present Status of Negotiations Toward Obtaining Uniform Regulations for Milk Bottles, **16**, 45.

Holbrook, F. S. (continued):
Present Status of Standard-Weight Bread Legislation, **24**, 162.
Standard Barrel Law, **10**, 176.
State Legislation, Resume, **7**, 18.
Visible Devices for Indications of Full Delivery, and Drainage Period of Liquid Measuring Devices, **20**, 95.
Weights and Measures of Puerto Rico, **9**, 138.
Holland, P. L., State of Maryland:
The Regulation of Utility Meters, **26**, 145.
Hollomon, Hon. J. H., Assistant Secretary for Science and Technology:
Addresses, **47**, 1; **48**, 63.
Holmes, E. H., U.S. Department of Agriculture:
The Use of Vehicle Scales in the Highway Planning Survey, **27**, 87.
Holmes, John, Swift & Co.:
Weighing in the Meat-Packing Industry, **22**, 56.
Holton, E. B., State of New Jersey:
Supervision Over the Buying of Old Gold, **25**, 36.
Holton, R. H., Assistant Secretary of Commerce for Economic Affairs:
Address, **49**, 133.
Holwell, J. J., New York City, NY:
Federal Regulation of Weighing and Measuring Devices, **12**, 134.
Manner of Sale of Cordage, **16**, 71.
Relationship Between Weights and Measures Officials, Merchants, and Manufacturers, **15**, 75.
Weights and Measures Education in the Schools, **13**, 167.
Hoover, Hon. Herbert, Secretary of Commerce:
Addresses, **14**, 79; **15**, 25; **16**, 76; **17**, 135; **18**, 74; **19**, 116.
Horigan, J. B., U.S. Dept. of Agriculture:
Interstate Status of Package Goods, **17**, 47.
Hornby, J. H. B., Oxford, England:
Remarks on Mission, **51**, 121.
Horton, C. F., National Bureau of Standards:
Method of Test and Inspection of Vehicle Scale Developed by the NBS, **28**, 75.
Reminiscences, **31**, 145.
Hosch, G. C., Measuregraph Co.:
Machine Measurement for Fabrics, **11**, 117.
Hovey, V. F., National Association of Ice Cream Manufacturers:
Shall Ice Cream be Sold by Weight--Viewpoint of the Manufacturer, **18**, 129.
Howard, H. E., Miami, FL:
LPG Meter Testing in Miami, **39**, 52; **39**, 70.
Prepackaged Merchandise, Informative Labeling and Enforcement Procedures, **35**, 91.
Hoxie, W. M., John Wood Co.:
Training Schools for Weights and Measures Officials and Servicemen, **37**, 64.
Hubbard, H. D., National Bureau of Standards:
Graphical Presentation of Data in Annual Reports, **23**, 95.
Hubbard, M. A., State of Virginia:
Vehicle-Scale Testing Equipment, **31**, 70.
Hubble, C. T., Food and Drug Administration:
Report from FDA, **45**, 101.
Weights and Measures Control at the Federal Level, **47**, 79.
Hughes, W. C., State of Massachusetts:
Modern Weights and Measures Technology, **49**, 129.
Hunt, W. H., U.S. Department of Agriculture:
Recommended Procedure for State Inspection of Moisture-Measuring Devices, **54**, 53.
Hunter, P. J. Allegheny County, PA:
Local "Master" Vehicle Scales, **31**, 89.
Huntoon, R. D., National Bureau of Standards:
Address, **52**, 7.
Hurley, Richard, Colt Industries:
Services Available to NCWM from the Advertising Council, **66**, 25.
Hutton, H. P., State of Oklahoma:
The Weights and Measures Program in a State Department of Agriculture, **40**, 13.

I

Intermann, E. A. G., Jr., New Jersey Retail Ice Cream and Candy Mfrs. Assn.:
Shall Ice Cream be Sold by Weight--Viewpoint of the Retailer, **18**, 133.
Irvine, T. L., Salt Lake City, UT:
Destination Weighing of Coal From the Standpoint of the Official, **14**, 54.

J

Jackson, C. L., State of Wisconsin:
- State-City Weights and Measures Cooperation in Wisconsin, **41**, 116.
- Supervision of Food Package Weights in Wisconsin, **44**, 121.
- The New Wisconsin Program, **48**, 120.

Jackson, C. W., U.S. Department of Agriculture:
- Activities of the USDA Grain Division in the Weights and Measures Field, **49**, 87.

Jacob, M., Belgium:
- Remarks on International Organization on Metrology, **39**, 69.

Jarrett, H. S., State of West Virginia:
- Scope and Preparation of Annual Reports, **23**, 92.
- State Requirements for Net-Content Marking of Packages Other Than Food Packages, **24**, 42.

Jennings, M., State of Tennessee:
- Administrative Actions Under Model Law Provisions--Advertising, Price Signs, Labels, **47**, 135.
- Chairman's Address, **56**, 1.
- The Development of a State Measurement Center, **53**, 97.

Jensen, M. W., Madison, WI:
- The Retail Poultry Market **36**, 78.

Jensen, M. W., National Bureau of Standards:
- Activities of the Office of Weights and Measures, **49**, 37; **50**, 31; **52**, 127; **53**, 41.
- An Experiment in Farm Milk Tank Gaging and Testing, **40**, 112.
- Paper Milk Containers, **40**, 103.
- Performance of Inspectors and Gasoline Pumps, **38**, 82.
- Report on LPG Meter Testing--NBS LPG Meter Prover, **42**, 75.
- Seminar on Fair Packaging and Labeling, **52**, 53.
- Technical Program of the Office of Weights and Measures, **51**, 123.
- The Challenges Facing Government, Industry, and Consumers, **55**, 41.
- Weights and Measures Approval Seals, **39**, 65; **40**, 109.

Jensen, Tom, National Conference of State Legislatures:
- National Conference of State Legislatures, **61**, 84.

Johnson, Hon. Byron L., Congressman, Colorado:
- Statement, **45**, 145.

Johnson, C. G., State of California:
- Net Weight, **13**, 118.
- Proper Publicity for a Weights and Measures Department, **11**, 45.

Johnson, D. R., National Bureau of Standards:
- Equity Beyond the Marketplace, **64**, 32.

Johnson, E. W., Federal Trade Commission:
- Documentation of Interpretations and Methods of Sale, **61**, 23.
- Remarks, **57**, 109.
- Role of FTC Under the Fair Packaging and Labeling Act, **54**, 119.

Johnson, G. L., State of Kentucky:
- Administrative Problems--Enforcement of Package-Marking Requirements, **42**, 109.
- Measures for Progress, **58**, 1.
- New Weights and Measures Organization, Public Relations, **35**, 107.

Johnson, H. K., National Bureau of Standards:
- Maintenance, Use, and Calibration of Large Test Weights, **54**, 49.

Johnson, K. H., National Live Stock and Meat Board:
- Uniform Retail Meat Identity Standards, **61**, 29.

Johnson, J. T., Metric Association, Inc.:
- Metric System of Weights and Measures, **43**, 52.

Johnson, W. B., Jr., Erie Meter Systems:
- Remote Gasoline Pumps, **38**, 69.

Jolin, R. O., Internal Revenue Service:
- Activities of IRS in the Weights and Measures Field, **49**, 67.
- Role of IRS Under the Fair Packaging and Labeling Act, **54**, 126.

Jones, F. E., National Bureau of Standards:
- Grain Moisture Measurements and the Weights and Measures Community, **60**, 52.

Jones, J. R., State of South Carolina:
- The Responsibilities of the Official to His Weights and Measures Association, **35**, 94.

Jordan, Dr. B., University of Texas at Dallas:
- A University Looks at Measurement Science Education, **65**, 34.

Judge, Jean Miss, Grand Union Company:
- Remarks, **57**, 93.

Judson, L. V., National Bureau of Standards:
- International Bureau of Weights and Measures and General Impressions of Weights and Measures Abroad, **17**, 81.
- Testing of Standards of Length, **20**, 28.

K

Kanzer, Barnett, State of New York:
- Vehicle-Scale Testing Equipment, **28**, 100.

Keay, William, Gilbert & Barker Mfg. Co.:
- Evolution of Gasoline Pumps, **39**, 32.

Keefe, Hon. S., Minnesota State Senate:
Consumer Protection in Minnesota, **58**, 122.
Keene, A., United States Taximeter Corp.:
Transmission Drive for Taximeters, **19**, 34.
Kelly, Dennis, Bridgeport, CT.:
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, **18**, 57.
Kendall, D. B., Toledo Scale Co.:
Discrete Weighing Systems--Applications, **51**, 74.
Remarks, **57**, 117.
The Challenge of the 70's in Weighing Technology from the Viewpoint of the Scale Manufacturer, **55**, 74.
Kennedy, J. T., District of Columbia:
Methods of Sale of Ice Cream, **33**, 73.
Prepack Meat Counters, **36**, 71.
Remarks on Reweighing Prepackaged Meats, **39**, 28.
Kennedy, L. L., Standard Oil Company of New Jersey:
The Distribution of LPG, **33**, 86.
Kennedy, L. L., Weights and Measures
Committee, American Petroleum Institute:
Progress Report on LPG Meter Testing, **39**, 54.
Kennedy, Ridgway, International Association of Ice Cream Manufacturers:
Standardization of Ice-Cream Cans, Brick Molds, and Cartons, **22**, 24.
Kennedy, V. C., Jr., State of Oklahoma:
Establishing a Bureau of Standards in Oklahoma, **45**, 137.
Kennedy, V. C., Jr., Streeter-Amet Co.:
The Science of Weighing--Tomorrow, **50**, 112.
Kennedy, V. C., Sr., National Scale Men's Association:
Report from NSMA, **40**, 12.
Kennett, H. C., Jr., U.S. Dept. of Agriculture:
Activities of the USDA Poultry Division in the Weights and Measures Field, **49**, 77.
Kerlin, W. A., Alameda County, CA:
Ice Cream--Sale By Weight, **36**, 35.
Testing of Vehicle-Tank Meters, **37**, 66.
Kerlin, W. A., State of California:
Testing Liquefied Petroleum Gas Vapor Meters, **49**, 150.
Kerr, R. H., U.S. Department of Agriculture:
Supervision Over Meats and Meat Products Under the Federal Meat Inspection Act, **26**, 132.
Kidd, R. E., Microwave Associates:
National Conference of Standards Laboratories, Its Roles and Missions, **64**, 45.
Kiley, E. V., American Trucking Associations:
The Trucking Industry's Stake in Accurate Weight Determination, **56**, 133.
Kinlaw, M. L., North Carolina Department of Agriculture:
Weights and Measures Program Evaluation: The State's Viewpoint, **62**, 110.
Kirschbaum, N. E., State of Wisconsin:
Improving Weights and Measures Administration in the United States, **42**, 50.
Klein, Hon. Julius, Assistant Secretary of Commerce:
Address, **23**, 57.
Klocker, C. L., State of Connecticut:
Retail Sale of Commodities by Weight or Measure, **29**, 16.
Vehicle-Scale Testing Equipment, **28**, 94; **31**, 67.
Klueter, Harry, State of Wisconsin:
Regulation of Sale of Ice Cream in Wisconsin, **18**, 137.
Knauer, Virginia H., Special Advisor to the President for Consumer Affairs, and Director, U.S. Office of Consumer Affairs:
Address, **54**, 137.
Consumer Protection, **70**, 15.
Remarks re Consumers, **56**, 102.
Koeser, R. L., National Bureau of Standards:
Information Program of the Office of Weights and Measures, **54**, 32.
Komich, A. J., Rockwell Manufacturing Co.:
Panel Discussion on Liquefied Petroleum Gas Liquid Metering, **54**, 58.
Konsoer, D. E., State of Wisconsin:
Analysis of Wisconsin Program, **55**, 185.
Korth, W. H., Ventura, California:
Pilot Program, **58**, 108.
Mail Order Shipping Problems, **62**, 57.
Kozich, S., Quality Audit Company:
The State of California Measurement System, **60**, 36.
Krach, Louis, France:
Weights and Measures Administration in France, **44**, 77.
Kremer, C. J., Retail Bakers' Association of America:
Bread-Weight Legislation and the Retail Baker, **16**, 104.
Kurtenbach, Dr. A., Daktronics, Inc.:
Voting Systems for Assemblies, **68**, 130.
Kushner, L. M., National Bureau of Standards:
Address, **57**, 9.
Kyrk, Miss Hazel, American Home Economics Association:
Standardization of Packages, **29**, 85.

L

Lamb, J. G., Scott Paper Co.:
Need of a Uniform Method of Marking Toilet Paper, **11**, 113.
Lamont, Hon. Robert P., Secretary of Commerce:
Address, **22**, 47.
Lampman, R., Council of Economic Advisers:
The Consumer Advisory Council--Innovation in Consumer Representation, **48**, 10.
Landvater, J. H., Ohaus Scale Corp.:
A Manufacturer's View on Type Approval, **56**, 117.
Landvater, J. H., Landvater Associates:
Metric Training Seminars, **61**, 69.
Lang, M. L., State of Indiana:
Sealed Cans for Dispensing Lubricating Oil, **25**, 65.
Larrick, G. P., Food and Drug Administration:
A New Approach to Weights and Measures Control, **46**, 132.
Larson, Fred, Shell Oil Co.:
Remarks on Shell Oil Co. LP-Gas Liquid Meter Prover, **40**, 75.
Lawrence, David, The United States Daily:
Radio Talk on National Conference on Weights and Measures, **20**, 67.
The Press and the Official, **20**, 67.
Lawrence, E. K., Baltimore and Ohio Railroad:
Origin and Destination Weighing of Coal in Carload Lots, **16**, 123.
Lazo, Hector, Cooperative Food Distributors of America:
Standardization of Packages, **29**, 89.
Lee, E. P., General Foods Corporation:
Factors Contributing to Package Fill Variation, **40**, 35.
Statistics in Quantity Control of Packages, **41**, 57.
Leed, T. W., University of Massachusetts:
Unit Pricing and Open Code Dating, **57**, 90.
Leithauser, G. H., Baltimore, MD:
Charges for Rug Cleaning, **35**, 143.
Net-Weight Markings of Packages and Cans of Tobacco, **37**, 51.
Retail Sale of Bar Soap, **36**, 62.
Lemke, A. M., President Northwestern Association:
Northwest Weights and Measures Association, **64**, 114.
Leonard, R. E., U.S. Office of Consumer Affairs:
Standards--Love Them or Leave Them, **64**, 102.
Letzkus, C. R., National Scale Men's Association:
Activities of NSMA, **27**, 71.
Levine, D., Monsanto Co.:
Product Standards and Polyethylene Film, **56**, 82.
Levitt, J. J., State of Illinois:
Testing Equipments for Large-Capacity Scales, Methods and Results, **26**, 54.
Levy, I. M., Chicago, IL:
Canned Poultry, **39**, 31.
Chicago Plan for Consumer Education, **43**, 23.
Standardization of Food Packages, **37**, 14.
Systematized Package Supervision, **34**, 103.
Lewis, H. B., Brown and Sharpe Mfg. Co.:
The Viewpoint of Industry Concerned with the Changeable Manufacturing Toward the Proposal to Standardize the Inch, **28**, 2.
Lewis, J. H., State of Washington:
Enforcement of State Laws and Regulations, **51**, 33.
Weights of Frozen Turkeys, **46**, 79.
Liles, J. E., State of Texas:
Vehicle-Scale Testing Equipment, **28**, 95.
Lindsay, C. A., Howe Scale Co.:
Heavy-Capacity Platform Scales--Apparatus and Methods for Factory Tests, **18**, 67.
Little, J. W., National Bureau of Standards:
Checking Odometers and Taximeters, **54**, 64.
Littlefield, J. L., State of Michigan:
Package Labeling, **46**, 37.
Lockridge, R., Dallas, Texas:
Cost-Benefit Performance Auditing--A Tool for Weights and Measures Program Improvement, **63**, 61.
Lohmann, Henry, National Association of Retail Grocers:
The Retail Grocer, **23**, 69.
Lundeen, David, State of Minnesota:
Grain Weighing, **37**, 30.
Luther, Harold, National Fisheries Institute:
Frozen Fish, **33**, 40.
Lutze, August, Sheboygan, WI:
Cooperation Between State and Local Weights and Measures Departments, **16**, 28.
Lyles, J. F., State of Virginia:
An Advisory Committee to a State Weights and Measures Agency, **49**, 106.
Address, **63**, 78.
Lynch, J. T., Millers' National Federation:
Progress Report on Packaging of Flour, **41**, 72.
Lynch, Hon. J. T., Under Secretary of Commerce:
Address, **56**, 5.
Lyon, C. A., State of New Hampshire:
Tomatoes in Retail Cartons, **37**, 5.

Mac--Mc (Also see M)

MacLean, A. D., Pittsburgh Equitable Meter Co.:
Testing of Gasoline Meters in the Factory, **21**, 122.
MacLean, R. W., Canada:
Central Programme for Weights and Measures in Canada, **42**, 44.
Some Experiences in Type Approval, **47**, 27.
Weights and Measures Service in Canada, **36**, 7.
MacIntosh, John, Suburban Rulane Gas Co.:
Suburban Rulane LP-Gas Liquid Meter Prover, **40**, 59.
McAllister, A. S., National Bureau of Standards:
The Labeling and Certification Plan in Connection with Federal Specifications, **25**, 42.
McBride, J. P., State of Massachusetts:
Chairman's Address, **43**, 4.
Fay Stanley Holbrook--In Memoriam, **30**, 3.
Reminiscing, **50**, 121.
McCarty, J. G., National Scale Men's Assciation:
Activities of NSMA, **30**, 78.
McClintock, J. H., Esso Standard Oil Co.:
Petrochemicals--Their Composition, Handling and Quantity Control, **41**, 31.
McCoubrey, A. O., National Bureau of Standards:
Expanding the Nation's Measurement System, **59**, 11.
Measurement Assurance--The Future of Legal Metrology, **63**, 48.
McCrory, R. J., Gilbarco, Inc.:
Electronic Components and Applications, **58**, 58.
McCutcheon, John W., Deputy Administrator, Meat and Poultry Inspection Technical Service, Food Safety Inspection Service, USDA:
Federal Role in Net Weight Compliance, **70**, 222.
McDade, H. J., San Diego County, CA:
Farm Holding Tanks, **37**, 20.
Quantity Statements on Rolls of Wallpaper, **41**, 122.
McDowell, D. N., State of Wisconsin:
Moving Ahead in Accurate Commercial Measurement in the United States, **45**, 12.
McEntee, R. J., McDowell-Wellman Engineering Co.:
Continuous Weighing Systems--Applications, **51**, 93.
McGrady, W. B., State of Pennsylvania:
Pennsylvania Serialization Law, **15**, 60.
McIntyre, G. S., National Association of State Departments of Agriculture:
Address, **47**, 75.
McLaughlin, F. E., U.S. Food and Drug Administration:
Implementation of the Fair Packaging and Labeling Act--Cooperation or Vexation, **52**, 54.
McLaughlin, F., President's Committee on Consumer Interests:
Address, **62**, 126.
The Emphasis is on "With", **53**, 72.
McLaughlin, T. J., Veeder-Root, Inc.:
Remarks, **57**, 126.
McLin, DeForest, Huntington County, IN:
The Itinerant Scale Mechanic, **24**, 154.
McNish, A. G., National Bureau of Standards:
The Role of Weights and Measures Officials in the Metric Study, **54**, 108.
McPherson, A. T., National Bureau of Standards:
Remarks, **38**, 62; **40**, 50; **42**, 105.
Services, of NBS, **39**, 39.
McQuade, L. D., Assistant Secretary for Domestic and International Business:
Address, **53**, 1.
McWilliams, Arthur, State of Ohio:
Elimination of Short Weight and Measure, **17**, 85.

M (Also see Mac--Mc)

Mackall, J. N., Maryland State Roads Commission:
Protection of Highways by Means of Portable Weighing Devices, **15**, 26.
Mackay, D. R., National Bureau of Standards:
Odometer Investigation, **49**, 47.
Progress in the Measurement of Milk, **47**, 22.
The Development and Use of National Voluntary Standards--Program of U.S. Department of Commerce, **54**, 102.
Macurdy, L. B., National Bureau of Standards:
Standards of Mass, **36**, 42.
Magoffin, Ralph, State of South Carolina:
Remarks as Moderator of Symposium on Packaged Commodities, **41**, 57.
Maguire, Leonard, Fairbanks, Morse & Co.:
Belt Conveyor Scales, **36**, 53.
Mann, D. B., National Bureau of Standards:
The Flow Measurement of Cryogenic Fluids, **56**, 127.
Maroney, E. J., New Haven, CT:
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Test, **18**, 58.
Problems Arising in the Supervision of Public Markets, **16**, 53.

Masters, D. W., Consumers Union of U.S.:
From John Quincy Adams to Madison Avenue, U.S.A., 44, 99.
Matthys, Dr. A. W., National Food Processors Association:
National Food Processors Association Solid Content Weight Labeling Program, 63, 20.
Mattimoe, Dr. G. E., Department of Agriculture, Hawaii; Chairman, 71st National Conference:
A Manager's View of Electronic Data Processing in Weights and Measures, 56, 47.
Hawaii--Weights and Measures Program and Progress, 52, 147.
Standardizing Standards - The Key to Equity, 71, 39.
Mayer, A. J., State of Louisiana:
New Weights and Measures Organization--Training, 35, 105.
Mayer, Harry, National Scale Men's Association:
Activities of NSMA, 31, 18.
Meads, A. H., Toledo Scale Co.:
Proposed Amendments to Specifications for Scales, 11, 107.
Meek, J. H., State of Virginia:
Federal Aid in Weights and Measures Programs, 34, 105.
How are the Benefits of Statewide Inspection Best to be Secured, 26, 29.
Marked Weight and Shrinkage of Hams and other Wrapped Meats, 20, 121.
Proposed Federal Legislation in Relation to Financing of Weights and Measures Inspection, 27, 25.
Some Comments on Cooperation Among Weights and Measures Officials, 21, 60.
Meek, R. E., State of Indiana:
Chairman's Address, 46, 24.
Remarks as Moderator of Symposium on Proving LPG Liquid Metering Systems, 40, 51.
Statement as Chairman-Elect of National Conference, 45, 145.
The Appearance in Trade of Liquid Measure of Nonstandard Sizes, 27, 103.
Vehicle-Scale Testing Equipment, 31, 67.
Meith, E. V., Eli Lily & Co.:
The Big Change to the Metric System, 43, 57.
Meredith, Francis, State of Massachusetts:
Equipment for Testing Large-Capacity Scales 24, 136.
Testing Vehicle-Tank Meters, 23, 108.
Meyer, Dr. L. S. Edinboro State College:
The Consumer Movement of the 1980's--What We Would Like to See From Weights and Measures, 65, 102.
Meyer, J. F., National Bureau of Standards:
Labeling of Incandescent-Filament Lamps, 28, 13.
Miller, C.K.S., National Bureau of Standards:
Electromagnetic Interference--A Problem of Growing Concern, 63, 1.
Miller, I. L., State of Indiana:
Attitude of the Middle West Toward the Abolition of Bushel Weights, 16, 82.
Enforcement of the Indiana Bread Law, 17, 40.
Equipment for Testing Large-Capacity Scales 24, 130.
Observations on Certain Air-Operated Gasoline-Meter Installations, 22, 104.
Operation of Compulsory Sales-By-Weight Statutes, 19, 61.
Sale of Chemically Treated Coal, 23, 66.
Miller, R. W., Jewel Companies, Inc.:
An Industry Perspective on Packaging Regulations 63, 24.
Mills, J. B., Ohmer Fare Register Co.:
Transmission Drive for Taximeters, 19, 36.
Mills, R. M., National Bureau of Standards:
Measurement Studies, 55, 120.
Milstead, K. L., U.S. Food and Drug Administration:
Legibility of Quantity Declaration on Packaged Commodities, 41, 77.
Minor, W. J., U.S. Department of Agriculture:
Role of the USDA under the Fair Packaging and Labeling Act, 54, 124.
Moller, Col. I. L., Traffic Department, District of Columbia:
Portable Devices Designed for Determining the Axle Loads of Loaded Trucks on Highways, 19, 151.
Montgomery, D. E., U.S. Department of Agriculture:
Consumers' Interest in Adequate Weights and Measures Supervision, 27, 16.
Surveying Weights and Measures from the Consumer's Viewpoint, 28, 28.
The Consumer Looks at Weights and Measures Administration, 29, 48.
Moore, C. R., Federal Trade Commission:
Activities of FTC in the Weights and Measures Field, 49, 64.
FTC, Its Authority, Its Activities, 44, 93.
Moore, E. V., State of New York:
Mutual Public Relations Problems of Weights and Measures Officials and American Agriculture, 34, 56.
Moore, G. B., Allegheny County, PA:
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, 18, 64.
Organization and Conduct of City and County Departments of Weights and Measures, 16, 41.
Moore, G. D. Gasoline Pump Manufacturers' Association:
Testing, Servicing, and Repair of Liquid Measuring Devices, 30, 56.
The Gasoline Pump Industry--One Year After the War, 32, 56.

Moore, G. E., Supply Systems Committee:
Remarks, **57**, 128.
Moran, J. J., Kimble Glass Co.:
Pharmaceutical Graduates, **45**, 41.
The Manufacture of Precision Glassware, **31**, 54.
Morey, F. C., National Bureau of Standards:
Vapor Meters, **35**, 159.
Morgan, C. C., Gary, IN:
A Novel Form of Weights and Measures School, **30**, 32.
Chairman's Address, **53**, 19.
Report from National Scale Men's Association, **39**, 15.
Morgan, R. T., General Services Administration:
Remarks, **57**, 53.
Morris, H., Giant Food Inc.:
Tare Weight in Computer Assisted Checkout Systems, **61**, 13.
Morsell, N. T., U.S. Treasury Dept.:
Quantity Requirements for Tabacco Under Federal Alcohol and Tobacco Tax Regulations, **41**, 27.
Moss, Hon. F. H., U.S. Senator, Utah:
Address, **55**, 33.
Moss, J. E., American Petroleum Institute:
Report of Central Committee on Automotive Transportation of the API, **32**, 23.
Vehicle Tanks, **33**, 60.
Mote, J. M., State of Ohio:
Reasons for Standard-Weight Loaves of Bread and Enforcement of Ohio Standard Weight Bread Law, **15**, 88.
Mueller, E. F., National Bureau of Standards:
Testing of Clinical Thermometers, **19**, 48.
Mueller, Hon. Frederick H., Secretary of Commerce:
Address, **45**, 1.
Mullinax, O. D., Department of Agriculture, State of Georgia:
Consumer Affairs Forum, **61**, 103.
Muhe, Walter, Germany:
Some Aspects of Legal Metrology in Germany, **43**, 11.
Murphy, J. A., Assistant Deputy Attorney General, State of New Jersey:
Technicalities in Weights and Measures Court Cases, **38**, 63.
Murphy, R. L., Interstate Commerce Commission:
Remarks, **57**, 45.
Murphy, R. W., U.S. Dept. of Commerce:
NPA Regulations and Weighing and Measuring Devices, **36**, 56.
Myers, Hon. J. T., Congressman, Indiana:
The Metric System and You, **53**, 79.

N

Nagel, Hon. Charles, Secretary of Commerce and Labor:
Addresses, **5**, 8; **6**, 111; **7**, 11.
Nagele, Frank, Weights and Measures Specialist, Michigan; Chairman, 72nd National Conference:
Consumer Involvement Fosters More Efficient Weights and Measures Enforcement, **72**, 32.
Nance, A. T., J. P. Stevens and Company,Inc.
Quantity Package Statement: Sheets and Pillow Cases, **62**, 28.
Natrella, M. G., National Bureau of Standards:
A Background for Understanding Sampling Plans, **61**, 77.
Neale, C. C., State of Minnesota:
Necessity of Maintaining Scale Levers Level and Lever Connections Plumb, **9**, 34.
Seals and Methods of Sealing, **8**, 204.
Weight Standardization of Bread, **13**, 115.
Neale, C. C., Toledo Scale Co.:
Weighing in Industry, **19**, 120.
Neale, C. C., Wayne Pump, Co.:
Fay Stanley Holbrook--In Memoriam, **30**, 4
Neale, R. J., U.S. Department of Agriculture:
State Cooperation in a National Program, **39**, 19.
Neigut, E. G., National Bureau of Standards:
MIS Analysis and Concept Development, **58**, 91.
Nelson, Mrs. Helen E., Consumer Counsel, California Governor's Office:
Weights and Measures in California--A Consumer View, **45**, 126.
Nelson, H. E., Milwaukee, WI:
Representing the Consumer Interest in Weights and Measures Law Enforcement, **60**, 74.
Nelson, M. A., State of Michigan:
Following Through on Conference Actions, **43**, 120.
Nicol, W. F., Dallas, Texas:
Welcome to Dallas, **62**, 113.
Nicholas, J. E., Indiana Motor Truck Association:
Highway Truck Weighing, **38**, 25.
Nidetch, Jean, Weight Watchers International:
Address, **56**, 104.
Nix, R. E., Gilbarco, Inc.:
Remarks, **57**, 125.
Norgord, C. P., State of New York:
Some Observations on Weights and Measures Administration, **23**, 48.

O

Oakley, C. H., State of Wyoming:
Adjustments by Weights and Measures Officials, **34**, 163.
O'Hagan, M. E., American National Metric Council:
Role of the American Metric Council, **59**, 54.
O'Keefe, James, Chicago, IL:
Chicago Ordinance in Relation to Vehicle Tank Meters and the Enforcement Thereof, **26**, 104.
Directing the Personnel of a Weights and Measures Department, **31**, 7.
Fay Stanley Holbrook--In Memoriam, **30**, 3.
O'Keefe, James (continued):
Recent Decisions Involving the Chicago Weighmaster Ordinance, **27**, 11.
Vehicle-Scale Testing Equipment, **31**, 70.
O'Meara, A. C., Swift and Co.:
Shrinkage Losses in Food Products, **43**, 79.
O'Neill, J. L., State of Kansas:
Second Annual National Weights and Measures Week, **44**, 19.
Orcutt, J. P., State of Colorado:
Address, **51**, 8.
Osborne, R. A., Food and Drug Administration:
Frozen Foods, **33**, 21.
Owen, W. J., Bradford, England:
History of the English System of Weights and Measures, **50**, 128.

P

Paddock, J. M., State of Illinois:
Vehicle Scales--Testing Equipment and Procedures, **33**, 112.
Page, W. J., Council of State Governments:
Sharing Power Responsibility, and Resources in the Federal System, **65**, 25.
Palmer, A. W., U.S. Department of Agriculture:
Sale of Cotton by Net Weight, and Standardization of the Bale, **23**, 22.
Pals, C. H., U.S. Dept. of Agriculture:
Activities of the USDA Meat Inspection Division in the Weights and Measures Field, **49**, 74.
Paludan, C. T. N., Marshall Space Flight Center:
Measurements on the Saturn Space Vehicle, **52**, 94.
Parron, J. A., Norfolk, VA:
Special Test for Vehicle-Tank Meters, **39**, 57.
Parrott, Dr. M. W., Oregon State Health Division:
Radiation Measurement--A Challenge That Calls for Cooperative Federal and State Action, **65**, 147.
Parry, William, National Bureau of Standards:
Legal Status of Rules and Regulations as Established by Decisions of the Courts, **22**, 132.
Notes on Digest of Weights and Measures Cases, **21**, 155.
Parsons, A. R., Honeywell, Inc.:
Seminar on Discrete and Continuous Weighing Systems, **51**, 57.
Patterson, Hon. Richard C., Jr., Assistant Secretary of Commerce:
Address, **28**, 41.
Paul, Lawrence, Richmond, VA:
Problems Arising in the Supervision of Public Markets, **16**, 58.
Payne, W. A., Monroe County, NY:
Equipment for Testing Large-Capacity Scales, **24**, 133.
Pearson, J. C., U.S. Food and Drug Administration:
Accuracy Requirements for Quantity Declaration on Packaged Commodities, **41**, 82.
Peet, R. W., Association of American Soap and Glycerine Producers, Inc.:
Quantity Declarations on Packaged Soap Products, **34**, 82.
Peffer, E. L., National Bureau of Standards:
Gauging of Fuel-Oil Storage Tanks, **19**, 22.
Methods for Investigating Reported Short Deliveries of Fuel Oil, **22**, 96.
Proposed Method for Testing Milk and Cream Bottles, **16**, 47.
Peiser, H. S., National Bureau of Standards:
State Mass Standards, **45**, 45.
Perkins, M., Landvater Associates:
Metric Training Associates, **61**, 69.
Perkins, Hon. Randolph, Committee on Coinage, Weights, and Measures, House of Representatives:
Address, **23**, 46.
Peterson, Esther, Special Assistant to the President for Consumer Affairs:
Address, **49**, 98; **63**, 91.
Unit Pricing--A Giant Step for Consumers, **56**, 90.
Peterson, H. E., Chemical Specialties Manufacturers Association:
Weights and Measures in Aerosol Commodities **45**, 77.

Peyton, D. L., United States of America Standards Institute:
Use of National Voluntary Standards-Program of United States of America Standards Institute, **54**, 95.
Pforr, R. R., Federal Grain Inspection Service:
Weighing Programs of the Federal Grain Inspection Service, **64**, 126.
Phillips, L. J., Texas A & M University:
Developing a National Training Program for Weights and Measures Officials, **66**, 29.
Pienkowsky, A. T., National Bureau of Standards:
Testing Standards of Mass (Office Standards and Test Weights), **19**, 103.
Pierce, W. J., University of Michigan Law School:
Mechanisms for Unification of State and Local Laws and Regulations, **65**, 64.
Pisciotta, Alex, New York City, NY:
Demonstation of Fuel-Oil Meter-Testing Equipment of the City of New York, **28**, 17.
Recently Enacted Ordinance Requiring Licensing of Scale Repairmen, **27**, 62.
Platt, F. L., Revere Corporation of America:
A Practical Approach to the EMI-RFI Problem in the Field, **63**, 13.
Polk, L. F., United States Metric Board:
Address, **63**, 104.
Pommersheim, John, Rockwell Manufacturing Co.:
Testing LPG Measuring Devices, **35**, 73.
Poppy, T. G., England:
Development of Weights and Measures Control in the United Kingdom, **42**, 22.
Powers, J. J., Philadelphia County, PA:
Administrative Problems--Relations Between State and Local Departments, **42**, 105.
Prause, J. H., Martin & Schwartz, Inc.:
Price Signs on Gasoline Service Stations, **32**, 107.
Prideaux, Earl, Department of Agriculture, State of Colorado:
New Horizons in Metrology, **62**, 60.
Primely, R. C., Theisen-Clemens:
Meeting the Challenge, **53**, 90.

Q

Queen, W.A., U.S. Food and Drug Administration:
Recent Activities of FDA Regarding Short Weight and Deceptive Packaging, **32**, 11.
Quinn, T. M., U.S. Food and Drug Administration:
Net Weight Labeling Regulations, **64**, 138.

R

Rafferty, J. J., Philippine Islands:
Weights and Measures Conditions in the Philippine Islands, **10**, 50.
Ragland, B. W., Richmond, VA:
Activities of Bureau in Richmond, **18**, 39.
Gasoline Meter Installations in a Ramp Garage, **22**, 79.
Promoting Contests, **28**, 125.
Temperature of Gasoline in Underground Storage, **25**, 54.
Rapp, M., Detecto Scales, Inc.:
A University Curriculum in Measurement Science, **49**, 13.
Rask, R. O., National Scale Men's Association:
Recent Activities of NSMA, **26**, 46.
Rassmussen, Fred, National Association of Ice Cream Manufacturers:
Shall Ice Cream be Sold by Weight--Viewpoint of the Manufacturer, **18**, 122.
Raybourn, J. S., Produce Packaging and Marketing Association:
Problems in Merchandising Packaged Fresh Produce, **54**, 84.
Raymund, F. M., Los Angeles County, CA:
Fabric-Measuring Devices, **39**, 64.
Reck, Dickson, Office for Emergency Management:
The Weights and Measures Officer and the Program for National Defense, **31**, 2.
Redfern, E. L., State of Iowa:
Training the Prospective Housewife, **19**, 86.
Redfield, Hon. William C., Secretary of Commerce:
Addresses, **8**, 12; **9**, 11; **10**, 13; **11**, 13; **12**, 119.
Reed, E. E. Phillips Petroleum Co.:
Phillips LP-Gas Liquid Meter Prover, **40**, 52.
Reed, F. T., Chemical Specialties Manufacturers' Association:
Net Weight in Aerosol Packages, **49**, 124.
Reed, W. E., Newark, NJ:
The Testing of Beer Barrels, **25**, 113.
Regar, R. S., U.S. Post Office Department:
Supervision of Post Office Scales, **24**, 97.
Reichmann, Fritz, State of New York:
Content of Container Law, **8**, 79.
Machine Measurements in Retail Dry Goods Store, **13**, 169.
Selection and Maintenance of Apparatus in Industrial Plants, **11**, 51.

Renfrew, Paul, Ralph N. Brodie Co., Inc.:
Testing Equipment for Large-Capacity Meters, **34**, 38.
Renfrew, Paul, Liquid Controls Corp.:
The Measurement of Liquid--Yesterday, **50**, 39.
Reynolds, G. D., Jr., John Chatillon & Sons:
Weights and Measures and Scale Problems and Opportunities, **52**, 105.
Rice, T. D., Massachusetts Fisheries Assn.:
Frozen Fish, **33**, 39.
Richard, C. L., National Bureau of Standards:
Platform Overhang of Vehicle Scales, **31**, 92.
Test Car Accuracy, **18**, 176.
The Effects on SR of Packing Pivots and Bearings with Grease, **30**, 88.
Two-Draft Weighing of Motor-Vehicle Loads, **28**, 63.
Richard, C. L., National Scale Men's Association:
Current Activities of NSMA, **24**, 168.
Richard, C. L., U.S. Department of Agriculture:
Developments in Electronic Weighing, **35**, 43.
Problems in Livestock Weighing Supervision, **38**, 46.
Testing Procedures for Livestock Scales, **34**, 50.
Tests of Livestock Scales, **33**, 57.
Richard, C. L., Truck-Trailer Manufacturers' Association:
Current Situation in Highway Axle-Load Weighing, **41**, 145.
Richards, W. S., Glass Container Association of America:
The Manufacture of Lubricating-Oil Bottles, **24**, 15.
Ring, D. S., National Paint, Varnish, and Lacquer Association:
Two-Way Dividends From Industry-Government Collaboration, **53**, 50.
Risser, R. E., Jr., Southwest Pump Co.:
The Retail Gas Pump--Accuracy Problems, **51**, 110.
Roberts, C. F., Jr., National Association of Manufacturers:
Us Procrusteans Make Strange Bedfellows, **52**, 69.
Roberts, G. M., District of Columbia:
Coin-Controlled Person-Weighing Scales, **22**, 128.
Regulatory Activities of a Weights and Measures Department, **19**, 26.
Retail Sale of Coal and Coke, **16**, 127.
The Fee System of Inspection of Weights and Measures, **26**, 9.
Undercover Buying as an Aid to Law Enforcement, **25**, 138.
Roberts, J. R., Manchester, England:
Training of the Weights and Measures Official in Great Britain, **46**, 50.
Roberts, R. W., National Bureau of Standards:
Address of the Conference President, **58**, 7.
Roberts, W. H., Vigo County, IN:
Sale of Garden Seeds, **33**, 159.
Robinson, J. J., Association of American Railroads:
AAR & AREA & SMA & ICC--Keeping on the Right Track, **57**, 41.
AAR Status Report on Stenciled Tare Weights of Freight Cars, **62**, 11.
Roeser, H. M., National Bureau of Standards:
Installation of Bureau of Standards Master Scale, **21**, 44.
Notes on Apparatus for Testing Heavy-Capacity Scales, **20**, 84.
Roeser, H. M. (continued):
Testing Methods and Tolerances for Portable Devices Designed for Determining the Axle Loads of Loaded Trucks on Highways, **19**, 153.
What the Bureau of Standards is Doing to Increase the Accuracy of Weighing Revenue Freight, **18**, 34.
Roeser, H. M., National Scale Men's Association:
Activities of NSMA, **32**, 20.
Roeser, H. M., Inland Steel Co.:
Impact on the Steel Business of Formal Specifications for Weighing Machinery, **34**, 96.
Roesner, H. M., Steeter-Amet Co.:
Automatic-Indicating Scales--Printed Weight Indications and Remote Weight Indications, **30**, 22.
Rogers, J. G., State of New Jersey:
New Equipment for Testing Heavy-Capacity Scales in New Jersey, **21**, 48.
Shall Ice Cream be Sold by Weight--Viewpoint of the Weights and Measures Official, **18**, 115.
Twisted Strands, **30**, 81.
Roof, R. R., State of Pennsylvania:
Development of a State Measurement Center, **56**, 139.
Roper, Hon. Daniel C., Secretary of Commerce:
Address, **27**, 84.
Rowe, M. B., State of Virginia:
National Association of State Departments of Agriculture, **54**, 148.
Rowe, S. C., U.S. Department of Agriculture:
Deceptive Containers, **30**, 138.
Rowe, S. C., U.S. Food and Drug Administration:
Foods and Drugs, **36**, 89.
Prepackaged Foods, **39**, 22.
Rowland, G. A., National Bureau of Standards:
National Voluntary Laboratory Accreditation Program, **61**, 90.
Roylance, W. M., Western Fruit Jobbers Association of America:
Sales by Weight, **10**, 109.
Rumsey, Herbert, Jr., National Independent Meat Packers Association:
Prepackaging of Meat in Meat Packing Plants, **41**, 95.

Runkel, H., U.S. Dept. of Agriculture:
Enforcement of Law in re Marking of Weights on Wrapped Meats, **14**, 45.
Russell, H. H., National Bureau of Standards:
Calibration of Tank Cars, **35**, 145.
NBS 1,000-Pound Balance, **40**, 31.
Russell, H. H. (continued):
Testing of Cordage-Measuring Devices, **36**, 100.
Testing Procedures for Four-Section Vehicle Scales, **34**, 145.
Ruttenberg, S. H., American Federation of Labor and Congress of Industrial Organizations:
Labor's Stake in Consumer Products, **45**, 122.

S

Saad, K. N., Arthur D. Little, Inc.:
Address, **53**, 43.
Sackett, I. D., Jr., National Oceanic and Atmospheric Administration:
Application of Quality of Contents Requirements to Packaged Seafoods, **63**, 66.
Saldana, E. J., Commonwealth of Puerto Rico:
Administration of Weights and Measures in Puerto Rico, **17**, 17.
Weights in the Sugar and Tobacco Industries, **20**, 35.
Samuels, F. L. N., Department of Prices and Consumer Protection:
Measurements in the United Kingdom Market Place, **63**, 29.
Sandbach, W., Consumers Union:
Truth-in-Packaging--A Coming Reality or a Mirage, **52**, 75.
Sanders, Arthur, Scale Manufacturers Assn.:
Activities of SMA, **32**, 63.
Little Omissions Can Lead to Serious Errors, **53**, 92.
Report of First National Weights and Measures Week, **43**, 25.
Sandman, R., U.S. Department of Agriculture:
Working of the Intergovernmental Affairs Office of U.S. Department of Agriculture, **64**, 154.
Sattler, Charles, State of West Virginia:
Interstate Packages, **36**, 74.
Sauthoff, Hon. Harry, Congressman, Wisconsin:
Remarks Relative to Standardization of Containers for Canned Foods, **27**, 35.
Saybolt, J. W., Glass Container Manufacturers Institute:
Forward March, **32**, 60.
Saybolt, J. W., Business Counsellor on Weights and Measures:
Remarks, **38**, 10.
Scheurer, W. A., Exact Weight Scale Co.:
Automatic Package Weighing Machinery, **38**, 40.
The Science of Weighing--Yesterday, **50**, 78.
Schier, W. M., American Institute of Baking:
Bread Tolerances, **46**, 90.
Schieser, W. J., Exact Weight Scale Co.:
The National Scale Mens Association--Its Program for the Future, **49**, 32.
Schindel, P. W., Association of General Merchandise Chains:
The Support and Concern of Producers and Distributors of General Merchandise in Packaging and Labeling, **55**, 55.
Schindler, Hon. Alfred, Acting Secretary of Commerce:
Greetings, **20**, 5.
Schlink, F. J., National Bureau of Standards:
Automatic Scales, **10**, 95.
Liquid-Measuring Pumps, **11**, 57; **11**, App. 2.
Schlink, F. J., Consumers' Research:
Deception of Consumers Through Techniques in Packaging and Labeling, **47**, 101.
Schmitz, J. A., Chicago Board of Trade:
Developments in Terminal Weighing of Grain **22**, 65.
Problems on Weights in the Handling of Grain, **12**, 140.
Schneider, J. C., Association of Food and Drug Officials of the United States:
Activities of the Association of Food and Drug Officials of the United States, **32**, 16.
Schon, D. A., National Bureau of Standards:
Measurement in a Dynamic Society, **50**, 73.
The Institute for Applied Technology of NBS, **49**, 6.
Schreyer, C. H., National Bureau of Standards:
Study on Fertilizers, **52**, 137.
Schwartz, A. W., State of New Jersey:
Air Releases on Power-Operated Gasoline Dispensing Units, **23**, 105.
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, **18**, 57.
Standardization of Containers for Foodstuffs and the Marking of the Weight of Commodities in Package Form, **13**, 122.
Schwarz, Mrs. Kathryn M., National Bureau of Standards:
The Laws and the Case Book, **35**, 120.
Remarks, **38**, 75.
Scott, G. D., Ex-Cell-O Corp.:
Machine Measurement of Market Milk, **36**, 67.
Scott, J. R., U.S. Department of Agriculture:
Current Position of the USDA Regarding the Labeling of Packing House Products, **43**, 93.

Scott, J. R. (continued):
Packing House Products, **36**, 88.
Quantity Statements on Packing House Products, **41**, 92.
Wholesale Labeling of Meat Products, **35**, 148.
Scribner, Jerry, California Department of Food and Agriculture:
National Net Weight or Federal "Rule of Thumb?", **64**, 142.
Searle, F. A., Landers, Frary, & Clark:
Regulation of New Types of Devices, **20**, 61.
Searles, R. W., Medina County, Ohio:
Chairman's Address, **55**, 3.
Seer, H. A., U.S. Treasury Department:
Quantity Requirements for Distilled Spirits, Beer, Wine, and Alcohol, under Federal Alcohol and Tobacco Tax Regs, **41**, 23.
Seiler, Dr. E., Federal Republic of Germany:
Type Approval--A Tool For Measurement Assurance in Legal Metrology, **65**, 138.
Sener, A. G., Sanitary Scale Co.:
Reconditioning Rejected or Trade-In Scales, **22**, 122.
Seraphin, T. A., Philadelphia, PA:
Testing of Gasoline Meters in the Field, **21**, 110.
Use of Auxiliary Automobile Tanks for Checking Gasoline Deliveries, **19**, 95.
Servin, J. A., Department of Lands, Standards, Weights and Measures Branch, Adelaid, Australia:
Conversion in Australia, **59**, 67.
Greetings From Australia, **58**, 23.
Seward, W. N., American Petroleum Institute:
Report of the Committee on Liaison With the Federal Government, **60**, 218.
Shanhouse, W. M., S. S. Hunter, Inc.:
Surface Gaging Farm Milk Tanks, **39**, 44.
Shankle, H. L., State of North Carolina:
Supervision Over Scales--LPG, **34**, 36.
Shannon, W. N., Berkel Inc.:
Computerized Checkstand Weighing System, **58**, 33.
Shannon, W. N., Hobart Manufacturing Co.:
The Metric Conversion of Scales as Viewed by the Scale Industry, **59**, 87.
Sharp, B. M., Philadelphia, PA:
System of Keeping Records, **10**, 171.
Shea, D. P., Massachusetts Consumers Council:
The Consumers Council of Massachusetts, **55**, 197.
Sheaffer, Hon. Craig R., Assistant Secretary of Commerce:
Address:, **38**, 1.
Sheehy, W. E., Fairfield County, CT:
The Men Who Make the Conference, **37**, 4.
Sheerin, H. J., Kimberly-Clark Corp.:
Progress Through Cooperation, **53**, 66.
Sherman, J. H., District of Columbia:
Weights and Measures Work from the Standpoint of the Efficiency Engineer, **10**, 122.
Shotzberger, M. I., Catawba College:
Management as a Modern Approach, **56**, 31.
Siebold, H. E., Liquid Controls Corp.:
The Meter Manufacturers Look at the 1970's, **55**, 100.
Siegel, Charles, National Association of Retail Grocers:
Prepackaged Perishable Commodities--The Marketer's Viewpoint, **35**, 89.
Sieger, W. H., Neptune Meter Co.:
Test Procedures and Equipment for Liquid Measuring Devices--Wholesale, **36**, 25.
Simila, K. J., State of Oregon:
Equity on the Move, **64**, 26.
Maintaining an Economic Balance During Inflationary Times, **60**, 104.
Sinclair, J. W., American Petroleum Institute:
Test Procedures for Vehicle-Tank Compartments, **34**, 129.
Sinclair, L. D., U.S. Department of Agriculture:
Trade Practice in the Meat Packing Industry, **41**, 124.
Siren, J. N., Sr., State of Louisiana:
Weighing of Cotton, **16**, 26.
Siu, Chock, I.:
The Consumer and the R-Value of Insulation, **62**, 31.
Skinner, W. W., U.S. Department of Agriculture:
Work in Relation to Ice Cream of the Joint Committee on Definitions and Standards, **18**, 135.
Sloat, R. H., Foodarama Supermarkets, Inc.,Freehold, NJ:
Effect of the Universal Product Code on Supermarket Operations and Equipment, **58**, 23.
Slough, R. K., Akron, OH:
Commodity Tolerances, **34**, 137.
Small, A. R., Underwriters' Laboratories:
Gasoline Pumps From the Standpoint of Safety, **13**, 59.
Smedley, William, Retail Merchants' Association of Pennsylvania:
The Retail Merchant, **17**, 111.
Smith, A., U.S. Postal Service:
Weighting on the Mail, **58**, 64.
Smith, A. B., State of Pennsylvania:
Raising the Standard for Local Weights and Measures Officials, **22**, 29.
Smith, A. R., National Truck-Tank and Trailer-Tank Institute:
Vehicle Tanks, **33**, 68.
Smith, A. T., State of New Jersey:
Testing Equipments for Large-Capacity Scales, Methods and Results, **26**, 47.
Vehicle Tanks, **33**, 63.
Smith C. B., National Scale Men's Association:
Activities of NSMA, **33**, 105.

Smith, C. P., Suffolk County, NY:
New Testing Device for Large-Capacity Scales, **22**, 75.
Smith, E. N., American Automobile Association:
Cooperative Program of the American Automobile Association, **22**, 86.
Smith, H. H. Cannon Mills Co.:
The Unique Aspects of Textile Package Labeling, **56**, 75.
Smith, L. C., National Association of Ice Industries:
Short Weighing in Ice Scales, **12**, 77.
Smith, M. D., National Canners Association:
The Art of Merchandising--Yesterday, Today, and Tomorrow, **50**, 141.
Smith, R. N., National Bureau of Standards:
Administrative Actions Under Model Law Provisions, **47**, 132.
Forum on Weighing, **54**, 39; **55**, 73.
OWM Training Program, **53**, 31.
Technical Training, **49**, 49; **50**, 34.
Training Program and Railway Track Scale Program, **52**, 140.
Smith, R. W., State of Minnesota:
Uniformity of State Laws in Weights Per Bus hel of Commodities, **8**, 106.
Smith, R. W., State of Wisconsin:
Mechanical Versus Supervisional Weights and Measures Work, **12**, 57.
Smith, R. W., National Bureau of Standards:
A Common Problem, **33**, 179.
Bureau of Standards Investigation on Commercial Filling of Milk and Cream Bottles, **16**, 43.
Bureau of Standards Investigation on the Transmission Drive for Taximeters, **21**, 21.
Charles C. Neale--In Memoriam: Presentation of Memorial Gavel to National Conference, **40**, 1.
Drainage Characteristics of Dispensers for Canned Lubricating Oil, **26**, 76.
Evaporation of Gasoline From Delivery Hose of Liquid-Measuring Devices, **15**, 111.
Executive Secretary's Report, **32**, 2.
Extension of Weights and Measures Supervision, **4**, 72.
Federal Specification AAA-S-121 for Weighing Scales, **25**, 23.
Notes on Grease-Measuring Devices, **23**, 16.
Proposed Procedure for Field Test of Fabric Measuring Devices, **15**, 93.
Proposed Method of Test of Taximeters, **18**, 78.
Report on the Testing of Vehicle Scales by NBS in Cooperation with the States, **27**, 46; **28**, 81; **29**, 57; **30**, 35; **31**, 61.
Test Weights of Large Denominations, **29**, 35.
Testing of Liquid-Measuring Devices, **14**, 64.
The Regulation of Repairmen, **33**, 122.
Uniformity of Regulations for Milk Bottles, **17**, 26.
Snyder, A. E., Terre Haute, IN:
The Value of Weights and Measures Radio Program, **29**, 19.
Soper, T. G., Fairbanks Morse:
Large Capacity Scale Designs, **58**, 41.
Souder, Wilmer, National Bureau of Standards:
Calibration of State Standards, **33**, 166.
Identification by Precision Methods of Comparison and Measurement, **22**, 49.
Southers, R., American Petroleum Institute:
Closed Fill Systems--For Ecology's Sake, **57**, 127.
Petroleum Industry Concern with Meter Accuracy, **55**, 111.
Southwick, C. A., Jr., American Tetra Pak Corp.:
New System for Packaging Milk and Other Fluids, **40**, 107.
Speer, J. F., Jr., Milk Industry Foundations:
The Support and Concern of Industry in Packaging and Labeling, **55**, 51.
Spilman, H. A., U.S. Dept. of Agriculture:
Consolidation and Amendment of Federal Standard Container Legislation, **24**, 44.
Federal Standard Container Act of 1928, **22**, 13; **23**, 53.
The Consolidated Standard Container Bill, **30**, 8.
Spinks, J. M., National Scale Men's Association:
Report from NSMA, **42**, 58.
Spotts, G. W., Shell Chemical Co.:
Packaging Standards for Fluid Milk Products, **53**, 54.
Stabler, T. M., National Bureau of Standards:
Activities of the Office of Weights and Measures, **54**, 29.
Forum on Organization and Management, **55**, 159.
Management of a Weights and Measures Program, **56**, 40.
New State Standards Program, **50**, 31; **52**, 130; **53**, 28.
State Standards and Laboratories, **51**, 125.
Stadolnik, E. H., Division of Standards, State of Massachusetts:
NCWM Committee on Metric Planning, **59**, 114.
Priorities for Progress, **66**, 1.
Stans, Hon. M. H., Secretary of Commerce:
Address, **54**, 1.
Staples, G. H., State of Minnesota:
Salary System Versus Fee System of Inspection, **12**, 87.
Starr, M. H., Howe Scale Co.:
Effect On Scale Design of Highway and Motortruck Design, **22**, 82.
Steel, R. E., National Fisheries Institute, Inc.:
Frozen Fish, **33**, 33.
Stender, C. H., State of South Carolina:
Chairman's Address, **48**, 18.
National Type Approval, **45**, 18.

Stephens, Dr. William P., Director/Secretary, New Mexico Department of Agriculture:
Presentation to the National Conference on Weights and Measures, **71**, 24.
Stephenson, J. H., Rochester, NY:
Testing of Gasoline Meters in the Field, **21**, 115.
Stern, H. J., Deputy Commissioner of Consumer Affairs, New York City:
Remarks, **57**, 96.
Stern, L. E., State of New Jersey:
Food Packages--When the Responsibility of the State, **41**, 110.
Stewart, J. C., State of Virginia:
Large-Capacity Scale-Testing Units, **54**, 40.
Stiefel, S. W., National Bureau of Standards:
Measuring Inaccuracy's Economic Distortion, **58**, 97.
Stier, H. L., State of Maryland:
The New Maryland Weights and Measures Law, **36**, 31.
Stillman, M. H., National Bureau of Standards:
Testing of Dry Gas Meters, **8**, 90.
Stitzell, J. A., Amoco Oil Company:
Metric: Now or Later, **64**, 106.
Stolle, Col. Richard, U.S. Air Force:
Weights and Measures Standards Used by the Air Force, **45**, 61.
Stouffer, L., Modern Package Magazine:
The Packager's Viewpoint on Truth-In-Packaging, **48**, 52.
Stratton, S. W., National Bureau of Standards:
Address Memorializing Louis Albert Fisher, 1864-1921, **15**, 2.
President's Addresses, **1**, 5; **2**, 5; **4**, 5; **5**, 7; **6**, 7; **7**, 15; **8**,15; **9**, 12; **10**, 17; **11**, 16; **12**, 15; **13**, 13; **14**, 16; **16**, 16.
Stratton, S. W., Massachusetts Institute of Technology:
Honorary President's Address, **17**, 89.
Straus, Hon. Oscar S., Secretary of Commerce and Labor:
Address, **3**, 55.
Strauss, Hon. Lewis L., Secretary of Commerce:
Address, **44**, 1.
Straw, R. F., National Association of Scale Manufacturers:
Cooperative Program of Public Relations and Education, **40**, 23.
Stringer, Arthur, National Association of Broadcasters:
"You're on the Air," **31**, 44.
Strobridge, E. K., Alameda County, CA:
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, **18**, 59.
Testing Equipments for Large-Capacity Scales, Methods and Results, **26**, 58.
Strong, L. P., State of Michigan:
Regulating the Fruit Crop in Michigan, **20**, 133.
Wheel Weighers on Highways, **24**, 123.
Stroop, D. V., American Petroleum Institute:
Weights and Measures Petroleum Products, **25**, 62.
Stulla-Gotz, Josef, President, International Committee of Legal Metrology:
The Goals and Purposes of the International Organization of Legal Metrology, **48**, 77.
Stutz, W. F., National Bureau of Standards:
Testing of Water Meters, **8**, 118.
Sullivan, G. H., Frozen Food Foundation, Inc.:
Frozen Foods, **33**, 39.
Sullivan, T. E., State of Indiana:
Packaged Food Standardization, **41**, 127.
Sweeney, C. A., Federal Trade Commission:
Remarks re the Fair Packaging and Labeling Act, **52**, 59.
Sweeney, J. A., Boston, MA:
Meeting the Problem of Peddlers and Transient Vendors, **18**, 21.
Swoger, W. F., State of Pennsylvania:
Methods adopted for Regulation of New Types of Devices, **20**, 43.

T

Tamano, Mitsui, National Research Laboratory of Metrology, Tokyo, Japan:
Japan's Transition to the Metric System, **47**, 31.
Tate, D. R., National Bureau of Standards:
Investigation of Axle-Load Weighing, **39**, 72.
Taylor, B., Exact Weight Scale Co.:
Discrete Weighing Systems--Testing, **51**, 79.
Taylor, G. F., Chief Assistant Prosecuting Attorney, Pontiac, MI:
Obtaining Evidence and Preparing a Case for Court, **41**, 17.
Taylor, J. K., National Bureau of Standards:
Problems in the Determination of Moisture, **48**, 70.
Taylor, John M., Director, Office of Compliance, Center for Food Safety and Applied Nutrition, FDA:
Federal Role in Net Weight Compliance, **70**, 222.
Taylor, Tyre, National Association of Retail Grocers:
Frozen Foods, **33**, 36.
Tewksbury, R. B., Fruit Dispatch Co.:
The Banana Market, **45**, 23.

Theilmann, R. H., State of Arizona:
Progress of Weights and Measures in the Far West, **18**, 71.
Tholen, A. D., National Bureau of Standards:
Tradition in Transition, **64**, 49.
Gateway to a Great Day, **66**, 5.
Thompson, M. S., Partner, Chadwell, Kayser, Rug gles, McGee and Hastings:
What Everyone Should Know About Those Supreme Court Cases Having to do with Moisture Losses--As of the Fourth of July, 1976, **61**, 24.
Thompson, R. D., State of Virginia:
Adoption of Test Methods by the National Conference on Weights and Measures, **33**, 59.
Problems in Livestock Weighing, **38**, 50.
Standardization of Report Forms, **34**, 76.
Thompson, R. D., U.S. Department of Agriculture:
Accurate Livestock Weights--Important to Agriculture, **40**, 47.
Activities of the USDA Packers and Stockyards Division in the Weights and Measures Field, **49**, 71.
Thompson, R. L., Department of Agriculture, State of Maryland:
Metrification--A One Time Opportunity, **61**, 1.
Thompson, W. E., State of Minnesota:
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, **18**, 60.
Thompson, W. I., Monmouth County, NJ:
Coordination of State, County, and City Activities, **44**, 117.
Tilford, Dr. C. R., National Bureau of Standards:
Pressure Measurement--A New Activity for Weights and Measures, **63**, 72.
Tinkey, J. C., State of Ohio:
Side-Beam and Hidden-Weight Scales, **23**, 134.
Side-Beams, Hidden Weights, and Dial Scales, **25**, 134.
Todd, J. N., Southern Railway System:
Railway Track Scale Testing Program, **37**, 34.
Tough, W. H., Sanitary Scale Co.:
Weights and Measures Education in England, **36**, 15.
Tolson, R. H., Texaco, Inc.:
The Measurement of Liquids--Today, **50**, 58.
Tonini, D. E., Scale Manufacturers Association:
Recommended Standards for Self-Contained Scales, **62**, 5.
Trask, R. P. Petroleum Equipment Institute:
Liquid Hydrocarbon Measurement in the Decade of the Eighties: The Needs for Research and Resourcefulness, **65**, 127.
Tribus, Hon., Myron, Assistant Secretary of Commerce for Science and Technology:
Government and Technology--The Challenge of the 70's, **55**, 13.
Trowbridge, Hon., A. B., Secretary of Commerce:
Address, **52**, 1.
True, J. F., State of Kansas:
Chairman's Address, **51**, 15.
Standby Service of Testing Equipment During Repairs, **34**, 68.
The Organization and Functions of the Weights and Measures Division of the National Association of State Departments of Agriculture, **49**, 114.
Truman, Hon. Harry S., President of United States:
Greetings, **32**, 5.
Trump, R. J., England:
Weights and Measures Administration in Great Britain, **26**, 83.
Tucker, C. E., State of California:
California Gasoline and Oil Substitution Act, **28**, 134.
Coordination Between Departments in Relation to Interstate Shipments, **29**, 9.
Turnbull, D. M., Seattle, WA:
Chairman's Address, **49**, 11.
Paper Milk Containers, **38**, 22.

U

Usher, E. F., Highland Park, MI:
Transparent Containers for Prepackaged Merchandise, **33**, 141.

V

Vadelund, E. A., State of Pennsylvania:
Package Control in Pennsylvania, **47**, 66.
Vadelund, E. A., National Bureau of Standards:
Forum on Merchandising, **56**, 74.
Forum on Packaging and Labeling--Status of Federal and State Programs, **55**, 46.
Panel on FPLA, **54**, 114.
Progress Under the Fair Packaging and Labeling Act, **53**, 36.
Status of Handbook 67 Revision, **58**, 83.
Vanderslice, J. M., Philadelphia County, PA:
Suppression of Fraudulent Practices, **23**, 86.

Vanderslice, J. M. (continued)
Testing Equipment for Large-Capacity Scales, **25**, 110.
Van Hall, M. E., Alfred State Tech:
A University Curriculum in Measurement Science--The Philosophy and Plan of the University, **49**, 15.
Van Keuren, H. L., National Bureau of Standards:
Method of Adjusting Railroad Track Scales, **10**, 86.
Van Male, A. J., International Organization of Legal Metrology:
Address, **63**, 111.
The International Organization of Legal Metrology and the Challenge of the 70's, **55**, 22.
Vestal, Hon. A. H., Com. on Coinage, Weights, and Measures, House of Representatives:
Approval of Type, **15**, 57.
Veth, Albert, Fair Scale Co.:
The Installation and Maintenance of Large Capacity Scales, **26**, 38.
Vignone, R. A., National Bureau of Standards:
Fair Packaging and Labeling Act Preemption, **53**, 38.
Search and Seizure, **54**, 35.
Vincent, C. H., Dallas, Texas:
Cost-Benefit Performance Auditing-A Tool For Weights and Measures Program Improvement, **63**, 59.
Development of Dallas Department of Consumer Affairs, **58**, 115.
Expectations for the Eighties, **65**, 1.
Votaw, G. A., Cleveland, Ohio:
Scoring Machines for Ice, **20**, 22.

W

Wallace, L. T., Department of Food and Agriculture, State of California:
Why Not Unshackle Measurement Standards?, **60**, 25.
Walleigh, R. S., National Bureau of Standards:
Address, **62**, 116.
Walsh, J. L. New York City, NY:
Federal Regulation of Weighing and Measuring Apparatus, **8**, 85.
Walter Muhe, Dr. I., Federal Republic of Germany:
Interdependence of Metrology, Standardization and Quality Assurance, **65**, 115.
Walton, W. W., National Bureau of Standards:
Progress in the Measurement of Moisture in Grain, **46**, 45.
Warne, C. E., Consumers Union:
Packaging as a Technique of Deceit, **43**, 37.
Warner, G. W., State of Wisconsin:
Heavy-Capacity Platform Scales--Apparatus and Methods for Field Tests, **18**, 54.
Measure-Containers and Nonmeasure-Containers, **35**, 162.
Methods Adopted for Regulation of New Types of Devices, **20**, 56.
Standardization of Packages of Canned Foods, **27**, 36.
Wisconsin Equipment for Testing Heavy-Capacity Scales, **15**, 32.
Warnlof, O. K., National Bureau of Standards:
A Different View on Tolerance Application, **61**, 5.
Critical Path for Handbook 44 Metric, **62**, 66.
Forum on Measurement, **56**, 116.
Keeping Pace Through Training, **55**, 83.
Retail Sale of Beef by Hanging Weight, **54**, 73.
Warren, J. A., American Management Association:
Management and the Control of Weights on Prepackaged Products, **43**, 74.
Warshaw, S. I., National Bureau of Standards:
The Tower of Babel, **69**, 27.
Wasko, B., Voland Corp.:
Weights and Measures in Japan, **47**, 38.
Watson, O. H., National Scale Men's Association:
Report from NSMA, **41**, 12.
Way, E. O., Canada:
Administration of Weights and Measures in Canada, **24**, 61.
Weaver, E. R., National Bureau of Standards:
Physical Properties of Liquefied Petroleum Gases, **30**, 48.
Weaver, M. A., Program Director, Institute for Weights and Measures:
An Opportunity for Professional Training, **66**, 31.
Webster, H. A., State of New Hampshire:
Sale of Wood, **12**, 61.
Weeks, Hon., Sinclair, Secretary of Commerce:
Addresses, **41**, 1; **43**; 1.
Wehmann, E. F., Neptune Meter Co.:
Evaluation of the Volumetric and Gravimetric Methods of Testing LP-Gas Liquid Meters, **40**, 70.
Panel Discussion on LPG Liquid Metering, **54**, 58.
Temperature Compensated Meters in LP-Gas Service, **45**, 64.
The Measurement of Liquids--Tomorrow, **50**, 63.
Weibley, J. W., Pittsburgh Taximeter Co.:
Transmission Drive for Taximeters, **19**, 38; **20**, 81.

Wellington, R. R., Skelly Oil Co.:
Skelly Oil Co. LP-Gas Liquid Meter Prover, **40**, 68.
Wells, B. H., The Seven-Up Company:
The Metrication of Seven-Up-The Liter Leader, **62**, 63.
Wells, W. C., Pan American Union:
Weights and Measures of Latin American Countries, **12**, 125.
Wessels, F. H., State of Virginia:
Building a State Program, **40**, 15.
West, Hon. Charles, Congressman, State of Ohio:
Address, **24**, 77.
West, R. P., Morris & West:
A Study to Determine Meter Accuracy Capability, **52**, 116.
Westwood, E. C., Salt Lake City, UT:
Salt Lake City and Ice Cream, **37**, 48.
Wheeler, Hon. William R., Assistant Secretary of Commerce and Labor:
Address, **4**, 77.
White, W. G., State of New Hampshire:
Portable Testing Equipments for Large Capacity Meters and Vehicle-Tank Compartments, **26**, 110.
White. W. T., State of New York:
Education of Public to Appreciation of Necessity for Accuracy, **14**, 21.
Wholesale Deliveries of Gasoline, with Special Reference to Vehicle Tanks, **15**, 53.
Whitty, W. J., National Bureau of Standards:
A Role for Automatic Data Processing in Weights and Measures, **52**, 45.
Wickham, D. J., State of New York:
Address, **53**, 16.
Wiley, J. E., Santa Barbara County, California:
Remarks, **57**, 78.
Willenbrock, F. K., National Bureau of Standards:
Measurement in a Changing World of Technology, **56**, 111.
Preparing for a Metric America, **60**, 6.
The View Ahead, **57**, 26.
Welcome to N.B.S., **61**, 126.
Williams, A. P., National-American Wholesale Grocers' Association:
Standardization of Packages, **29**, 104.
Williams, D. H., International Association of Ice Cream Manufacturers:
Prepackaged Ice Cream Measure-Containers, **38**, 20.
Williams, E., Food and Drug Administration:
Food Labeling-The Next Step, **63**, 42.
Williams, Robert, Nassau County, NY:
Administrative Problems--Justification for Budget Increases, **42**, 112.
Chairman's Address, **47**, 8.
Remarks, **38**, 82.
Williams, R. T., State of Texas:
The Accreditation of Weights and Measures Jurisdictions, **56**, 58.
Williams, W. O., Trumbull County, OH:
Sealer's Responsibility Relative to Person-Weighing Scales, **24**, 106.
Williams, Hon. Walter, Under Secretary of Commerce:
Addresses, **39**, 1; **40**, 3; **42**, 1.
Wilson, S. H., State of Georgia:
Nontax-Paid Gasoline, **25**, 50.
Winslow, M. H., Winslow Government Standard Scale Works, Inc.:
Heavy-Capacity Platform Scales--Apparatus and Methods for Factory Tests, **18**, 68.
Witt, L. E., Milwaukee, WI:
Local "Master" Vehicle Scales, **31**, 87.
Uniformity of Interpretation and Enforcement, **34**, 90.
Wolfe, W. C., National Bureau of Standards:
Progress in the Measurement of Moisture in Grain, **46**, 45.
Wollin, H. F., National Bureau of Standards:
A Progress Report on Aerosol Packaged Products, **49**, 116.
Observations on Our Mutual Objectives, **59**, 35.
Program of the Office of Weights and Measures, **52**, 127; **53**, 26.
Report Forms for the Weights and Measures Official, **41**, 35.
The Future is Now: **57**, 17.
Tomorrow's Facilities for Standards and Measurement, **49**, 38.
Wolski, E. E., Colgate Palmolive Co.:
Big Intelligence From Little Numbers, **51**, 114.
Does Equity Prevail, **56**, 85.
Statistics Made Uncomplicated, **64**, 3.
Worthley, G. C., Fairbanks, Morse & Co.:
Looking Ahead in the Scale Industry, **39**, 16.

Y

Youden, W. J., National Bureau of Standards:
Performance of Inspectors and Gasoline Pumps, **38**, 82.
Simplified Statistical Quantity Control, **48**, 97.
Young, Hon. John Russell, Board of Commissioners, District of Columbia:
Address of Welcome, **36**, 1.

Young, W. E., William E. Young and Company:
The Implications of Metrification for the Packaging Industry, **59**, 108.

Young, W. M., A. H. Emery Company:
Scale Design and Weighing Trends in the Eighties, **65**, 85.

Z

Zaucha, T. K., National Association of Food Chains:
Supermarket Automation--UPC and the Computerized Checkout Counter, **60**, 83.

Zelazny, D. J., Reliance Electric Company:
Weighing the Future--A New Challenge, **59**, 46.

Zeleny, Lawrence, U.S. Dept. of Agriculture:
Moisture Measurement in the Grain Industry. **44**, 47.

Zeller, Tony, Presto Products:
Technical Aspects of Polyethlene Products Relating to Consumers and Standards, **62**, 40.

APPENDIX A

CONFERENCE REPORTS

Publications of the National Institute of Standards and Technology are sent to the leading scientific, technical, and public libraries. The Superintendent of Documents, Government Printing Office (GPO), also makes Government publications available to Government depository libraries; therefore, copies of the Conference Reports may be available for reference use in such libraries. The GPO also maintains a limited number of copies of the most recent Conference reports. Information on availability can be obtained by telephoning the GPO order desk (tel: 202-783-3238).

The proceedings of the first through the sixteenth NCWM annual meetings may be purchased in either paper copy form or in microfiche from the National Technical Information Service (NTIS), Springfield, VA 22161. Conference reports from the seventeenth to the fifty-seventh meetings are not available for purchase; however, reference copies are maintained by the National Institute of Standards and Technology Office of Weights and Measures (tel: 301-975-4012). Microfiche copies of reports beginning with the fifty-eighth meeting of the NCWM may be purchased from NTIS. Price information can be obtained from the NTIS order desk (telephone: 703-487-4650).

LIST OF CONFERENCE REPORTS

Publication Designation	Number of Conference	Year of Conference
M4	1	1905
M5	2	1906
M6	3	1907
M7	4	1908
M8	5	1910
M9	6	1911
M10	7	1912
M11	8	1913
M12	9	1914
M13	10	1915
M14	11	1916
M41	12	1919
M43	13	1920
M48	14	1921
M51	15	1922
M55	16	1923
M59	17	1924
M70	18	1925
M74	19	1926
M80	20	1927
M87	21	1928
M101	22	1929
M116	23	1930
M129	24	1931
M156	25	1935
M157	26	1936
M159	27	1937
M161	28	1938
M164	29	1939
M167	30	1940
M170	31	1941
M186	32	1946
M189	33	1947
M195	34	1949
M199	35	1950
M202	36	1951
M206	37	1952

LIST OF CONFERENCE REPORTS
(continued)

Publication Designation	Number of Conference	Year of Conference
M209	38	1953
M212	39	1954
M216	40	1955
M219	41	1956
M222	42	1957
M225	43	1958
M228	44	1959
M235	45	1960
M239	46	1961
M244	47	1962
M254	48	1963
M263	49	1964
M272	50	1965
M290	51	1966
SP297	52	1967
SP311	53	1968
SP318	54	1969
SP342	55	1970
SP358	56	1971
SP379	57	1972
SP391	58	1973
SP407	59	1974
SP442	60	1975
SP471	61	1976
SP517	62	1977
SP532	63	1978
SP566	64	1979
SP599	65	1980
SP629	66	1981
SP645	67	1982
SP663	68	1983
SP684	69	1984
SP704	70	1985
SP725	71	1986
SP734	72	1987
SP750	73	1988

☆ U.S. GOVERNMENT PRINTING OFFICE: 1989-242-200/00059

NIST-114A
(REV. 3-89)

U.S. DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

BIBLIOGRAPHIC DATA SHEET

1. PUBLICATION OR REPORT NUMBER
NIST/SP-769

2. PERFORMING ORGANIZATION REPORT NUMBER

3. PUBLICATION DATE
September 1989

4. TITLE AND SUBTITLE

INDEX to the REPORTS of the National Conference on Weights and Measures From the First to the Seventy-Third (1905 to 1988)

5. AUTHOR(S)

Frances C. Bell, W. G. Mott, and Nancy Chaconas, Editors

6. PERFORMING ORGANIZATION (IF JOINT OR OTHER THAN NIST, SEE INSTRUCTIONS)

U.S. DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
GAITHERSBURG, MD 20899

7. CONTRACT/GRANT NUMBER

8. TYPE OF REPORT AND PERIOD COVERED
Final

9. SPONSORING ORGANIZATION NAME AND COMPLETE ADDRESS (STREET, CITY, STATE, ZIP)

Same as item # 6

10. SUPPLEMENTARY NOTES

Library of Congress Catalog Card Number: 89-600745
Supersedes NBS SP 691

[ ] DOCUMENT DESCRIBES A COMPUTER PROGRAM; SF-185, FIPS SOFTWARE SUMMARY, IS ATTACHED.

11. ABSTRACT (A 200-WORD OR LESS FACTUAL SUMMARY OF MOST SIGNIFICANT INFORMATION. IF DOCUMENT INCLUDES A SIGNIFICANT BIBLIOGRAPHY OR LITERATURE SURVEY, MENTION IT HERE.)

This publication comprises a subject index and a speaker index for the Reports of the National Conference on Weights and Measures from the First (1905) through the Seventy-Third (1988) and supersedes NBS Special Publication 691.

12. KEY WORDS (6 TO 12 ENTRIES; ALPHABETICAL ORDER; CAPITALIZE ONLY PROPER NAMES; AND SEPARATE KEY WORDS BY SEMICOLONS)

index; measures; national conference; reports; weights and measures

13. AVAILABILITY

[X] UNLIMITED

[ ] FOR OFFICIAL DISTRIBUTION. DO NOT RELEASE TO NATIONAL TECHNICAL INFORMATION SERVICE (NTIS).

[X] ORDER FROM SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402.

[ ] ORDER FROM NATIONAL TECHNICAL INFORMATION SERVICE (NTIS), SPRINGFIELD, VA 22161.

14. NUMBER OF PRINTED PAGES
70

15. PRICE

ELECTRONIC FORM

NIST Technical Publications

Periodical

Journal of Research of the National Institute of Standards and Technology—Reports NIST research and development in those disciplines of the physical and engineering sciences in which the Institute is active. These include physics, chemistry, engineering, mathematics, and computer sciences. Papers cover a broad range of subjects, with major emphasis on measurement methodology and the basic technology underlying standardization. Also included from time to time are survey articles on topics closely related to the Institute's technical and scientific programs. Issued six times a year.

Nonperiodicals

Monographs—Major contributions to the technical literature on various subjects related to the Institute's scientific and technical activities.

Handbooks—Recommended codes of engineering and industrial practice (including safety codes) developed in cooperation with interested industries, professional organizations, and regulatory bodies.

Special Publications—Include proceedings of conferences sponsored by NIST, NIST annual reports, and other special publications appropriate to this grouping such as wall charts, pocket cards, and bibliographies.

Applied Mathematics Series—Mathematical tables, manuals, and studies of special interest to physicists, engineers, chemists, biologists, mathematicians, computer programmers, and others engaged in scientific and technical work.

National Standard Reference Data Series—Provides quantitative data on the physical and chemical properties of materials, compiled from the world's literature and critically evaluated. Developed under a worldwide program coordinated by NIST under the authority of the National Standard Data Act (Public Law 90-396). NOTE: The Journal of Physical and Chemical Reference Data (JPCRD) is published quarterly for NIST by the American Chemical Society (ACS) and the American Institute of Physics (AIP). Subscriptions, reprints, and supplements are available from ACS, 1155 Sixteenth St., NW., Washington, DC 20056.

Building Science Series—Disseminates technical information developed at the Institute on building materials, components, systems, and whole structures. The series presents research results, test methods, and performance criteria related to the structural and environmental functions and the durability and safety characteristics of building elements and systems.

Technical Notes—Studies or reports which are complete in themselves but restrictive in their treatment of a subject. Analogous to monographs but not so comprehensive in scope or definitive in treatment of the subject area. Often serve as a vehicle for final reports of work performed at NIST under the sponsorship of other government agencies.

Voluntary Product Standards—Developed under procedures published by the Department of Commerce in Part 10, Title 15, of the Code of Federal Regulations. The standards establish nationally recognized requirements for products, and provide all concerned interests with a basis for common understanding of the characteristics of the products. NIST administers this program as a supplement to the activities of the private sector standardizing organizations.

Consumer Information Series—Practical information, based on NIST research and experience, covering areas of interest to the consumer. Easily understandable language and illustrations provide useful background knowledge for shopping in today's technological marketplace.

Order the **above** *NIST publications from: Superintendent of Documents, Government Printing Office, Washington, DC 20402.*

Order the **following** *NIST publications—FIPS and NISTIRs—from the National Technical Information Service, Springfield, VA 22161.*

Federal Information Processing Standards Publications (FIPS PUB)—Publications in this series collectively constitute the Federal Information Processing Standards Register. The Register serves as the official source of information in the Federal Government regarding standards issued by NIST pursuant to the Federal Property and Administrative Services Act of 1949 as amended, Public Law 89-306 (79 Stat. 1127), and as implemented by Executive Order 11717 (38 FR 12315, dated May 11, 1973) and Part 6 of Title 15 CFR (Code of Federal Regulations).

NIST Interagency Reports (NISTIR)—A special series of interim or final reports on work performed by NIST for outside sponsors (both government and non-government). In general, initial distribution is handled by the sponsor; public distribution is by the National Technical Information Service, Springfield, VA 22161, in paper copy or microfiche form.

U.S. Department of Commerce
National Institute of Standards and Technology
(formerly National Bureau of Standards)
Gaithersburg, MD 20899

Official Business
Penalty for Private Use $300